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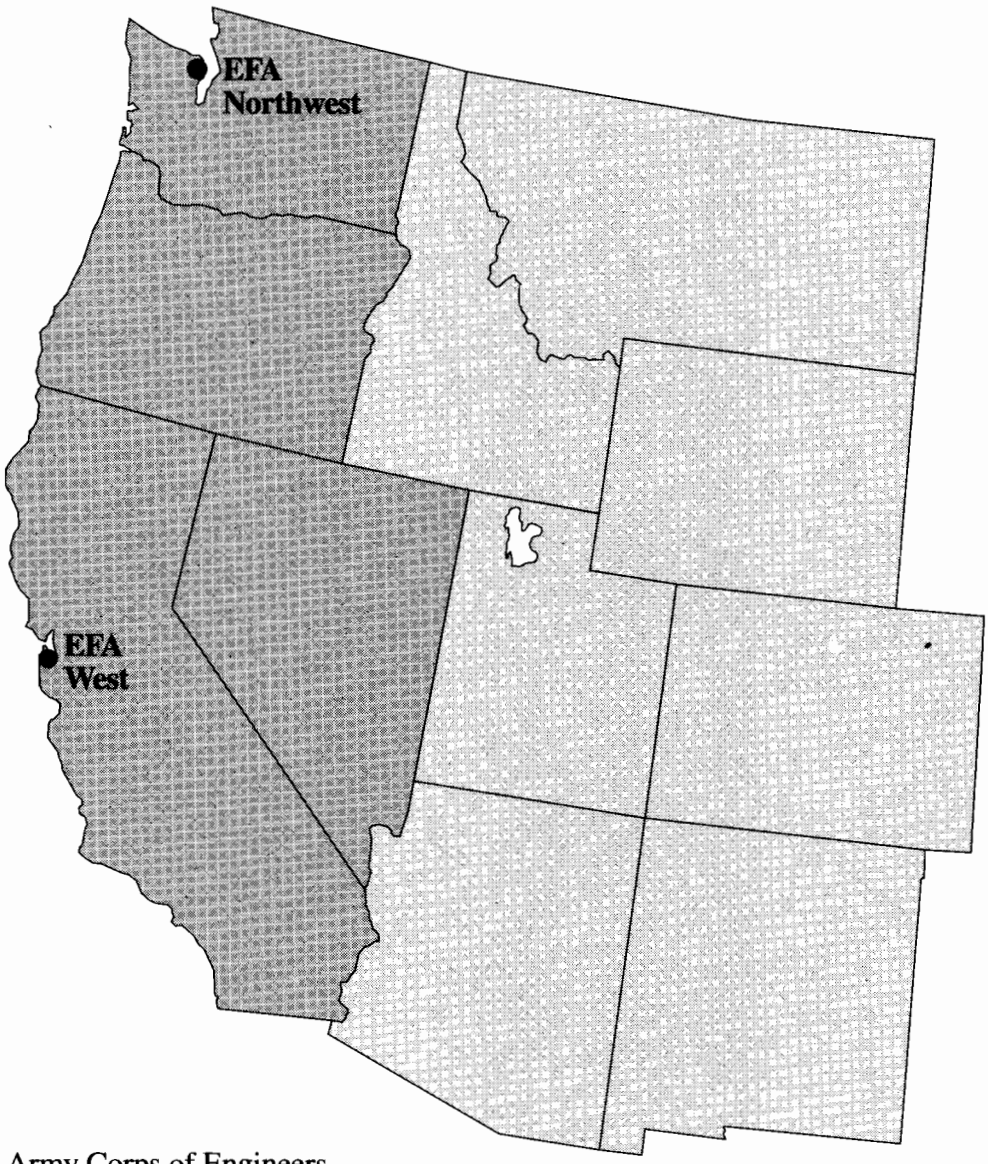
Technical Report No. 9



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

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Amy E. Halpin and Kelly L. Holland
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At the request of Engineering Field Activity (EFA), West, the U.S. Army Corps of Engineers Mandatory Center of Expertise for the Curation and Management of Archaeological Collections (MCX-CMAC), located at the St. Louis District, conducted a survey of archeological collections and associated documentation generated from archeological investigations conducted on Navy facilities within the jurisdiction of EFA West and EFA Northwest. Site visits were conducted during the period November 1993–August 1994 to assess the archeological collections. EFA West and EFA Northwest are responsible for collections located at 31 facilities in California, Nevada, and Washington. In sum, approximately 1,009 cubic feet of artifacts from 36 collections and 354 reports were located. All collections require at least partial rehabilitation to comply with federal regulation 36 CFR Part 79, Curation of Federally-Owned and Administered Archeological Collections.

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by
Amy E. Halpin and Kelly L. Holland

Michael K. Trimble and
Christopher B. Pulliam
Series Editors

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List of Acronyms

ARS	Archaeological Resource Service
BLM	Bureau of Land Management
CINP	Channel Islands National Park
CSULA	California State University, Los Angeles
CVMH	Carpinteria Valley Historical Museum
DoD	Department of Defense
EFA	Engineering Field Activity
FISC	Fleet and Industrial Supply Center
GIS	geographic information systems
HVAC	heat, ventilation, and air-conditioning
MCX	mandatory center of expertise
MNI	minimum number of individuals
MWTC	Mountain Warfare Training Center
NAD	Naval Ammunition Depot
NAS	Naval Air Station
NAVBASE	Naval Base
NAVCOMSTA	Naval Communications Station
NAVFAC	Naval Facility
NAVHOS	Naval Hospital
NAVPGSCOL	Naval Postgraduate School
NAVSECGRUACT	Naval Security Group Activity
NAVSHIPYD	Naval Shipyard
NAVSTA	Naval Station
NAWS	Naval Air Weapons Station
NCBC	Naval Construction Battalion Center
NCEL	Naval Civil Engineering Laboratory
NFD	Naval Fuel Depot
NHMLAC	Natural History Museum of Los Angeles County
NPS	National Park Service
NRS	Naval Radio Station
NRTF	Naval Radio Transmitting Facility
NSC	Naval Supply Center
NSM	Nevada State Museum
NTS	Naval Torpedo Station
NUWC	Naval Undersea Warfare Center
NUWES	Naval Undersea Warfare Engineering Station
OLF	Outlying Landing Field
PMTC	Pacific Missile Test Center
PWCSFB	Public Works Center, San Francisco Bay
RMW	RMW Paleo Associates
SBMNH	Santa Barbara Museum of Natural History
SCCC	Seattle Central Community College

SDMM	San Diego Museum of Man
SHPO	State Historic Preservation Office
SMI	San Miguel Island
SUBASE	Submarine Base
UCB	University of California, Berkeley
UCLA	University of California, Los Angeles
UCSB	University of California, Santa Barbara
UNR	University of Nevada, Reno
WESTDIV	Western Division, Naval Facilities Engineering Command
WPNSTA	Weapons Station
WPNSUPFACSBDET	Weapons Support Facility, Seal Beach Detachment
WSU	Washington State University

Executive Summary

Problem

Federal archeological collections and associated documentation are priceless national resources, a legacy to the American public. Their care and conservation has been mandated by Congress since 1906.

Unfortunately, the proper care and management of these materials has been largely ignored or underfunded. Many of our nation's heritage resources have been placed and then abandoned in the attics, basements, and storage closets of countless facilities across the United States. Others have been illegally transported to Europe, where they remain today. The result has been a steady deterioration of the collections, which include many significant objects associated with long-vanished cultures as well as existing Native American communities.

Federally sponsored mitigation programs usually provide for the recovery of materials from archeological sites, analyses of the recovered items, publication and circulation of final reports, and 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 salvage programs were completed. Through the years, archeological collections were curated at no expense to the federal government by the various universities, museums, firms, and state repositories holding them. Unfortunately, the lack of funding and inadequate facilities now seriously hinder these institutions' ability to adequately care for the collections.

Standards and guidelines for the preservation of federal archeological collections are set forth in 36 CFR Part 79, Curation of Federally-Owned and Administered Archeological Collections. However, the preservation and management procedures for many federal archeological collections are demonstrably substandard, clearly falling below the standards and guidelines required of federal agencies.

Background

Commanding Officers of each naval shore facility are responsible for complying with all cultural resource laws and regulations, ensuring that archeological materials recovered from the facility are curated properly. The Engineering Field Activity (EFA), West, Naval Facilities Engineering Command advises and assists their naval shore facilities with environmental, natural, and cultural resource compliance activities. EFA West also provides management to those facilities that have been closed and are awaiting disposal.

Federal laws and regulations require that prehistoric and historical-period artifacts and associated records acquired as a result of federal under-takings be curated in repositories that possess long-term professional curatorial capabilities. Federal agencies are encouraged to use these collections for education, scientific study, and public interpretation. Funding shortfalls, lack of a consistent national policy, and years of accumulation and neglect of collections have resulted in noncompliance, effectively preventing use of the collections by the public. Federal collections are public property, the result of many years of archeological research and the expenditure of millions of federal dollars.

In 1993, Western Division, Naval Facilities Engineering Command (WESTDIV) applied for and received funds from the Department of Defense Legacy Resource Management Program to assess the archeological collections within the WESTDIV area of responsibility. The naval shore facilities of the Engineering Field Activity, Northwest (EFA Northwest), also were subsumed under this funding (Table 1). In October 1994, WESTDIV was realigned as Engineering Field Activity, West (EFA West), a command equal to EFA Northwest and subordinate to the Southwest Division, Naval Facilities Engineering Command, San Diego. After realignment, EFA Northwest assumed greater responsibility for compliance with historic preservation laws and regulations for the naval shore facilities in Alaska, Idaho, Oregon, and Washington. Facilities in Oregon and Washington were included in this work because the project started prior to the change in WESTDIV's status.

At the request of WESTDIV/EFA West, curation-needs assessments for archeological collections, including associated documentation, recovered from naval shore facilities under the footprint of EFA West and EFA Northwest were conducted by the U.S. Army Engineers District, St. Louis. Status of the collections that include material subject to the Native American Graves Protection and Repatriation Act (NAGPRA; P.L. 101-601) was also assessed. With the exception of NAWS China Lake, which had already been assessed by the St. Louis District, and naval shore facilities in Alaska and Idaho, assessments of archeological materials were performed between fall 1993 and August 1994. Each EFA West and EFA Northwest naval facility was officially notified of the collections assessment.

Table 1.
Summary of Collections Information for
EFA West and EFA Northwest Naval Shore Facilities

Facility [a]	Evaluated for This Report?	Archeological Materials Present [b]	NAGPRA Status
Alaska			
NAS Adak	no	—	—
NAVFAC Adak	no	—	—
NAVSECGRUACT Adak	no	—	—
NAVSTA Adak	no	—	—
David Taylor Naval Research Development Center	no	—	—
California			
EFA West, San Bruno	yes	records only	—
FISC Oakland	yes	—	—
NFD Point Molate	yes	both	Section 5 inventory may be required
Mare Island Naval Shipyard	yes	both	Section 5 inventory may not be required
NAS Alameda	yes	—	—
NAS Lemoore	yes	—	—
NAS Moffett Field	yes	both	Section 5 inventory not required
Naval Auxiliary Landing Field, Crow's Landing	yes	—	—
NAWS China Lake	no	both	Section 5 inventory required
NAWS Point Mugu	yes	records only	—
OLF San Nicolas Island	yes	both	Section 5 inventory required
San Miguel Island	yes	both	Section 5 inventory required
NCEL Port Hueneme	yes	—	—
NAVCOMSTA Stockton	yes	—	—
NCBC Port Hueneme	yes	records only	—
NAVFAC Centerville Beach	yes	—	—
Naval Medical Center Oakland	yes	—	—
NAVPGSCOL Monterey	yes	—	—
PWCSFB Oakland	yes	—	—
NAVSECGRUACT Skaggs Island	yes	—	—
NAVSTA Treasure Island	yes	yes	Section 5 inventory required
WPNSTA Concord	yes	—	—
MWTC Bridgeport	yes	both	Section 5 inventory not required
Nevada			
NAS Fallon			
Oregon			
NAVFAC Coos Head	yes	—	—
Washington			
EFA Northwest, Poulsbo	yes	records only	—
NAS Whidbey Island	yes	both	Section 5 inventory required
Boardman Bombing Range, Oregon	yes	—	—
NAVFAC Pacific Beach	yes	—	—

Table 1 (continued).

Facility [a]	Evaluated for This Report?	Archeological Materials Present [b]	NAGPRA Status
WPNSUPFACSBDET			
Port Hadlock	yes	both	Section 5 inventory required
NAVSHIPYD Puget Sound	yes	records only	—
NSC Puget Sound	yes	—	—
NAVSTA Puget Sound	yes	—	—
NAVBASE Seattle	yes	—	—
NUWC Keyport	yes	records only	—
SUBASE Bangor	yes	both	Section 5 inventory not required

[a] Subfacilities are listed by major command, not by state.
[b] Archeological materials include artifacts and associated records; "—" indicates that neither are present.

Because of budget considerations, only collections located in California, Nevada, and Washington repositories were assessed. Therefore, our assessments did not include those collections from the Channel Islands (e.g., San Nicolas and San Miguel Islands) that are located in museums outside these three states and in other countries. Navy responsibility is unclear for those collections outlined in the publications *Time's Flotsam: Overseas Collections of California Indian Material Culture* (Blackburn and Hudson, Anthropological Papers No. 35, Ballena Press and Santa Barbara Museum of Natural History, 1990) and Archaeological Resources of San Nicolas Island, California (Meighan and Eberhart, *American Antiquity* 19:109–125, 1953). It is recommended that further investigation be made into the responsibility for any of these collections that were recovered before the Navy's presence on the islands. These collections should be assessed and, if necessary, returned to the United States.

A total of 354 reports and 36 associated artifact collections relating to EFA West and EFA Northwest facilities was identified. Assessments revealed varying degrees of care for the Navy's archeological collections.

Findings

Status of Physical Facilities

Repository Adequacy

For the purpose of this work, facilities are defined as official entities (e.g., a museum, a contractor, a Navy facility), and repositories are defined as separate structures (e.g., a museum annex or off-site storage building, a contractor's office, a university hall) that house archeological

materials or documentation. As such, a facility may have more than one repository for archeological collections. EFA West and EFA Northwest artifact and record collections are curated at 31 facilities, encompassing 39 separate repositories in California, Nevada, and Washington. None of these repositories meets all of the standards mandated by 36 CFR Part 79.

Repository Maintenance

Most of the repositories and collections storage areas receive some sort of maintenance. Maintenance of the facilities refers to building upkeep and repair, in addition to adhering to a regular cleaning schedule. Of the 39 repositories inspected, 33 (85%) are maintained on a regular basis. The other 4 (10%) of the repositories are cleaned only on an as-needed basis, and 2 (5%) have no maintenance.

Environmental Controls

An essential element in minimizing the deterioration of collections is controlling the storage environment. This is accomplished by stabilizing relative humidity and temperature at levels recommended by the American Association of Museums (AAM). Only seven (18%) of all of the repositories and collections storage areas examined have the heating, ventilation, and air-conditioning system (HVAC) recommended for maintaining adequate environmental control. Fourteen (36%) of the storage areas have heat and air-conditioning, 16 (41%) have partial environmental controls consisting of only heat or air-conditioning, and 2 (5%) have no environmental controls. Most often, temperature and humidity levels are not monitored.

Another significant environmental factor, often ignored, is damaging ultraviolet rays emitted from natural and/or artificial light. Only 11 (28%) of the collections storage areas use filters on any of the light sources. Fortunately, many of the collections are protected by their storage units or primary and secondary containers, and are exposed to these damaging rays only when they are retrieved from storage.

Security

Fifteen (38%) of the repositories meet federal standards for the security of archeological collections. These facilities have operational intrusion alarms and maintain limited, secured access to the archeological and associated records collections.

Fire Detection and Suppression

Nineteen (49%) of all inspected repositories contain sprinkler systems for fire suppression. However, seven (18%) contain environmentally dangerous halon extinguishers or tanks for fire suppression. Thirty-two (82%) of all of the collections storage areas have some type of fire-detection system (e.g., manual fire alarms, smoke alarms, or heat-detection devices).

Pest Management

Twenty-nine (74%) of the repositories have an integrated pest-management program that includes both regular monitoring and spraying. Four (10%) use control procedures only on an as-needed basis, and six (16%) have no pest-management controls.

Status of Artifacts

EFA West and EFA Northwest artifact collections comprise approximately 1009 ft^3 of material in 36 collections. Many of the collections have not been cleaned, labeled, or packaged.

Overall, primary containers for artifact collections consist of acidic cardboard boxes and unsealed wooden drawers, which are frequently overpacked, resulting in damage to the artifacts. Label information on primary containers is inconsistent at best.

Secondary containers are those containers in direct contact with the artifact. Forty percent of the EFA West and EFA Northwest artifact collections are stored in nonarchival plastic bags, including grocery bags, sandwich bags, and zip-lock bags. Other secondary containers used for packaging these collections include aluminum foil, newspaper, plastic film canisters, and small acidic, cardboard boxes. The wide variety of secondary containers is largely nonarchival, and greatly contributes to the deterioration of the collections. Twenty percent of the artifact collections are not stored in secondary containers; they are stored loose within primary containers. Considerable damage to fragile artifacts has resulted from this lack of protection.

Major prehistoric material classes present in the EFA West and EFA Northwest artifact collections are lithics (32%), faunal remains (17%), and shell (18%). Major historical-period material classes include ceramics (1%), glass (3%), and metal (1%) (see Chapter 53).

Status of Human Skeletal Remains

Human skeletal remains are not included in the summary of material classes discussed above. The assessment team found that human

skeletal remains, located at 10 of the assessed repositories, were segregated from artifact collections and curated differently. Approximately 249+ ft^3 (20%) of the EFA West and EFA Northwest archeological collections consist of human skeletal remains. Not included in this number are those human skeletal remains curated at the Phoebe Apperson Hearst Museum of Anthropology, University of California, Berkeley, as they were not made available to the St. Louis District assessment team. Using the museum's catalog cards, an estimate of the minimum number of individuals (MNI) was calculated at 41.

Additionally, the Center for Northwest Anthropology, WSU, Pullman, was not assessed by the St. Louis District assessment team. The center was contracted to perform a similar curation-needs assessment for the WPNSUPFACSBDET Port Hadlock collections. They reported over 100 human bones and bone fragments in the WPNSUPFACSBDET Port Hadlock collection being curated at their facility, which represents a minimum number of three individuals. These remains were not included in the totals discussed previously.

Most of the assessed human skeletal remains are currently housed in facilities and containers that require rehabilitation. In addition, a complete inventory is required to comply with Section 5 of NAGPRA.

Status of Documentation

EFA West and EFA Northwest records encompass approximately 57.6 linear feet, and include 354 reports. Most records encountered consist of reports and administrative records, including correspondence, contracts, and scopes of work. Most of the original field documentation could not be located. This missing documentation contributes to the confusion when trying to establish artifact provenience. Missing records indicate that collections managers or archeologists in the past may not have considered associated documentation a part of their curatorial responsibilities.

Only two (5%) of the repositories have initiated proper archival-management procedures. None of the repositories has completely duplicated their paper records collections onto acid-free paper and stored them in secure and fireproof locations. Storage of these records has been in acidic file folders, which are inconsistently labeled and left loose within artifact containers or on shelves. The records, which are integral parts of these collections, are in the greatest danger. Action should be taken immediately to remedy this situation.

Status of Repository Management Controls

Management controls were assessed only at permanent curation facilities. Of the 31 facilities that have artifact and records collections, only 16 (52%) are considered permanent curation facilities. These

16 facilities must contain proper written collections-management policies and procedures. Fifteen (94%) of these permanent repositories maintain accession records for their collections. Fourteen (88%) of the facilities have written records detailing the physical locations of their collections in the repository, and/or have ever employed a computerized database-management system to manage their collections. Only three (19%) of the permanent repositories have written inventory policies.

Written policies regarding the curation of archeological artifacts exist at nine (56%) of the repositories. Records management policies are established at only seven (44%) of the facilities. Loan procedures are in place at 13 (87%) of the repositories, and written deaccessioning policies are established at nine (56%) of the curation facilities. Thirteen (81%) of the repositories have minimum standards outlined for the acceptance of materials; however, only six (43%) have written field guidelines for researchers depositing collections. None of the repositories that are considered permanent curation facilities has published a guide to the archeological collections in its care.

Corrective Actions

A number of corrective measures is necessary to bring the EFA West and EFA Northwest collections, and the facilities housing them, into compliance with 36 CFR Part 79. General recommendations include the following. For specific recommendations, refer to Chapter 54 and individual chapters.

1. Bring together all collections into four federally owned regional repositories, or distribute them to existing facilities in their state of origin and spend requisite funds to upgrade them.

2. Develop cooperative agreements with other agencies to share costs for facility upgrade, construction, or both.

3. Rehabilitate existing collections by reboxing and rebagging them in archival-quality containers. This includes developing a uniform catalog system.

4. Develop and implement uniform inventory procedures, for current collections and future work, and distribute these to all contractors as a preliminary to any future archeological work.

These general corrective measures, if implemented, would permit EFA West and EFA Northwest facilities to meet the minimum federal requirements for adequate long-term curation of archeological collections. By adopting this approach, EFA West and EFA Northwest facilities have the opportunity to implement a curation program that will serve their needs well into the next century.

Conclusions

Attainment of each recommendation may not be possible immediately. However, timely action is necessary because the artifacts and records are rapidly deteriorating in their current storage environments, and there is no long-term, consistent, management plan for their proper curation. The Navy's collections can provide important cultural information, but if not properly cared for will lose their potential educational and research value. Implementing the recommended corrective actions would ensure that the collections were more adequately cared for so that they will be available to future generations.

Acknowledgments

Antelope Valley Indian Museum, Lancaster, California

Edra Moore, Curator

Archaeological Resource Service, Petaluma, California

William Roop, Archeologist
Katherine Flynn, Archeologist

Basin Research Associates, San Leandro, California

Donna Garaventa, Research Scientist
Colin Busby, Archeologist

California State University, Los Angeles

Patricia Martz, Professor of Anthropology

Carpinteria Valley Historical Museum, Carpinteria, California

David Griggs, Director and Curator

Channel Islands National Park Visitor Center, Ventura, California

Kathleen Baldwin, Museum Technician
Don Morris, Cultural Resources Director

EFA Northwest, Poulsbo, Washington

Joe DiVittorio, Environmental Planner/Ecologist
Steve Foster, Facility Administrator
Roger Hanson, Community Planner
Peter Havens, Environmental Planner
Don Morris, Environmental Planner
Dale Rudolph, Chief, Environmental Planning Division
Carol Slade, Community Planner
Jerry Tomeo, Real Estate Specialist

EFA West, San Bruno, California

Patricia Duff, Environmental Protection Specialist/Archeologist
Lou Wall, Cultural Resource Program Manager

Lompoc Museum, Lompoc, California

Debra Argel, Director
Donna Whitney, Administrative Assistant

Natural History Museum of Los Angeles County

Chris Colman, Anthropology Collections Manager
Margaret Hardin, Curator of Archeology

NAS Fallon, Nevada

Larry Jones, Director, Real Estate and Natural Resources Section

NAS Whidbey Island, Washington

Steve Rothboeck, Environmental Planner

NAWS Point Mugu, OLF San Nicolas Island, and San Miguel Island, California

Steven J. Schwartz, Archeologist
René L. Vellanoweth, Research Assistant

WPNSUPFACSBDET Port Hadlock, Washington

Cindi Kunz, Wildlife Biologist

NAVSHIPYD Puget Sound, Bremerton, Washington

Kira Khadem, Historical Facilities Manager

SUBASE Bangor, Washington

Art Schick, Forester

NUWC Keyport, Washington

Sumner Baltzell, Facilities Engineer
Art McCandless, Facilities Engineer

Nevada State Museum, Carson City

Maggie Brown, Site Files Manager
Amy Dansie, Collections Manager

Northwest Archaeological Information Center, Sonoma State University, Rohnert Park, California

Leigh Jordan, Site Files Manager

Oregon State Historic Preservation Office

Leland Gilson, Staff Archeologist

Phoebe Apperson Hearst Museum of Anthropology, University of California, Berkeley

Dr. Burton Benedict, Museum Director
Kathleen Butler, Museum Scientist, NAGPRA
Madeleine Fang, Conservator
Joan Knudsen, Registrar
Edward Luby, Archeologist, NAGPRA
Gary Richards, Graduate Student Researcher, NAGPRA
Fritz Stern, Project Coordinator, NAGPRA Unit

RMW Paleo Associates, Mission Viejo, California

Ron Bissell, Archeologist/Owner

San Diego Museum of Man, San Diego

Ken Hedges, Chief Curator
Grace Johnson, Curator of Latin American Ethnography
Rose Tyson, Curator of Physical Anthropology

Santa Barbara Museum of Natural History, Santa Barbara, California

Dr. John Johnson, Curator of Anthropology

Seattle Central Community College, Washington

Dr. Astrida R. Blukis Onat, Professor of Anthropology/Archeology

Skagit County Historical Museum, La Conner, Washington

Jim Barmore, Museum Director
Patricia L. Doran, Registrar/Curator of Collections
Margaret K. Pederson, Curator of Education

Southwest Museum, Los Angeles

George Kritzman, Curator of Archeology

Swinomish Tribe, Washington

Lona Wilber, Tribal Representative

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

Mary Parr, Assistant Collections Manager
Laura Phillips, Collections Manager
Dr. Julie Stein, Curator of Archeology
Judith Sterling, Facilities Manager

University of California, Los Angeles

Dr. Roger Colten, Curator of Archeology
Dr. Sue-Ellen Gauld, Physical Anthropologist

University of California, Santa Barbara

Karen Rasmussen, Collections Manager
Susan Siefkin, Assistant Curator
Dr. Philip Walker, Physical Anthropologist

University of Nevada, Reno

Dr. Donald Hardesty, Curator of Archeology

Ventura County Museum of History and Art, Ventura, California

Myrle Kirk, Volunteer
Tim Schiffer, Curator

Washington SHPO, Olympia

Sara Steel, Information Specialist
Dr. Robert Whitlam, State Archeologist

Washington State University, Pullman

Alice Granski, Curator

Waterhouse Residence, Olympia, Washington

Mr. and Mrs. Joseph Waterhouse, Sr.
Mr. Joseph Waterhouse, Jr.

Wesson & Associates, Seattle, Washington

George Wesson, Archeologist

1

Introduction

The facilities of Engineering Field Activity (EFA) West and EFA Northwest are responsible for archeological artifact collections and accompanying documentation (hereinafter referred to as archeological collections) stored in 31 facilities in California, Nevada, and Washington. This responsibility is mandated through numerous legislative enactments, including the Antiquities Act of 1906 (P.L. 59-209), the Historic Sites Act of 1935 (P.L. 74-292), the Reservoir Salvage Act of 1960 (P.L. 86-523), the National Historic Preservation Act of 1966 (P.L. 89-665, as amended), and the Archaeological Resource Protection Act of 1979 (P.L. 96-95). Executive Order 11593 (U.S. Code 1971). Also, a number of federal regulations exist to ensure that federal agencies properly curate national archeological collections. Specifically, 36 CFR Part 79, Curation of Federally-Owned and Administered Archeological Collections, establishes standards, procedures, and guidelines for the preservation of federal archeological collections.

Archeological collections, as defined in 79.4(a) of 36 CFR Part 79, mean "material remains that are excavated or removed during a survey, excavation or study of a prehistoric or historic resource, *and* associated records that are prepared or assembled in connection with the survey, excavation or other study" (emphasis added). Associated records are further defined as "original records (or copies thereof) that are prepared, assembled and document efforts to locate, evaluate, record, study, preserve or recover a prehistoric or historic resource" [79.4(a)(2)]. Therefore, in keeping with these descriptions, all archeological investigations—survey, excavation, or other study—generate records associated with that specific endeavor, regardless of whether or not archeological materials were recovered. In this report the term associated records will be used to describe that set of archeological documentation generated as a result of a survey, excavation, or other study.

Additionally, the Department of the Navy's Environmental and Natural Resource Manual, *Historic and Archeological Resources Protection* (OPNAVINST 5090.1B, 23-6.7j, November 1994), states that commanding officers of shore facilities must provide for storage and professional curation of significant archeological collections acquired as a result of carrying out legal compliance actions.

The Native American Graves Protection and Repatriation Act (NAGPRA) was enacted in 1990 to identify federal holdings of Native American human skeletal remains, funerary objects, sacred objects, and objects of cultural patrimony, and to reach agreements with Native American tribes and Native Hawaiian organizations on the repatriation or disposition of these remains and objects. All federal agencies are required to meet mandated deadlines for compliance with NAGPRA. A summary of unassociated funerary objects, sacred objects, and objects of cultural patrimony was to be completed by November 16, 1993. Human skeletal remains and associated funerary objects were to be inventoried by November 16, 1995.

Initial contacts were made between EFA West and U.S. Army Corps of Engineers, St. Louis District, in 1992 as the first step in

complying with 36 CFR Part 79 and NAGPRA. An agreement was reached in 1993, and work began in the fall of 1993. The resulting agreement authorized the St. Louis District to conduct a curation-needs assessment of archeological collections recovered from those facilities within the jurisdiction of EFA West and EFA Northwest. This project would provide the most comprehensive listing of their collections to date and would include information for NAGPRA compliance.

In the agreement, the St. Louis District was to provide the following:

1. Professional and technical services to EFA West for identifying and locating archeological collections and associated documentation from naval facilities in California, Nevada, Oregon, and Washington.

2. Professional and technical services to EFA West for the inspection and inventory of archeological collections in their present repository.

3. A final report that would (a) detail the results of the inspection and evaluation; (b) address the physical description of all repository facilities, artifact collections, and associated documentation collections; and (c) make recommendations for compliance with the requirements of 36 CFR Part 79, including recommendations for better collections management; and

4. A bibliography, by facility, of all archeological reports identified during the assessment process.

Methods

Thirty-one facilities encompassing 39 separate repositories and independent collections storage areas were evaluated in the course of the curation-needs assessment. The following facilities housing EFA West and EFA Northwest collections were visited and assessed. However, the St. Louis District did not assess curation facilities at WSU, Pullman, and the Navy collections stored there because this institution had already been contracted to conduct an inventory of NUWC Keyport and WPNSUPFACSBDET Port Hadlock artifact collections. Staff at the university completed a self-assessment of their curation facility, and a summary of their information has been included.

- Antelope Valley Indian Museum, Lancaster, California
- Basin Research Associates, San Leandro, California
- California State University, Los Angeles (CSULA)
- Carpinteria Valley Historical Museum (CVMH), Carpinteria, California
- Channel Islands National Park (CINP), Ventura California
- Engineering Field Activity (EFA) Northwest, Poulsboro, Washington
- Engineering Field Activity (EFA) West, San Bruno, California
- Lompoc Museum, Lompoc, California
- Natural History Museum of Los Angeles County (NHMLAC), Los Angeles
- NAS Fallon, Nevada
- NAS Whidbey Island, Oak Harbor, Washington
- NAWS Point Mugu, California
- WPNSUPFACSBDET, Port Hadlock, Washington
- NAVSHIPYD Puget Sound, Bremerton, Washington
- SUBASE Bangor, Washington
- NUWC Division, Keyport, Washington
- Nevada State Museum (NSM), Carson City
- Phoebe Apperson Hearst Museum of Anthropology, University of California, Berkeley
- RMW Paleo Associates (RMW), Mission Viejo, California
- San Diego Museum of Man (SDMM), San Diego
- Santa Barbara Museum of Natural History (SBMNH), Santa Barbara
- Seattle Central Community College (SCCC), Seattle
- Skagit County Historical Museum (SCHM), La Conner, Washington
- Southwest Museum, Los Angeles

- Thomas Burke Memorial Washington State Museum, University of Washington, Seattle
- University of California, Los Angeles (UCLA)
- University of California, Santa Barbara (UCSB)
- University of Nevada, Reno (UNR)
- Ventura County Museum of History and Art, Ventura, California
- Washington State University (WSU), Pullman
- Waterhouse Residence, Olympia, Washington

Site visits were conducted during the period from November 1993 to August 1994. Assessments consisted of three different phases: pre-fieldwork, field inspection, and report preparation. Each phase is discussed below.

Pre-Fieldwork Investigation

Assessment of each facility's compliance with federal regulations included the performance of the following tasks.

1. A National Park Service National Archeological Database and general records search was performed for each state and county containing EFA West and/or EFA Northwest facilities.

2. Real-estate maps of each facility were acquired for the purpose of establishing base boundaries and determining the topographic maps required for site-file searches.

3. Site-file searches were conducted at respective state information centers and/or archeology and historic preservation offices to determine whether there were sites located within the facilities' jurisdictions, and to determine where collections from the facilities, if there were any, might be located.

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

5. All facilities and personnel likely to be knowledgeable about any Navy collections, including museums, universities, and private contractors, were interviewed by telephone.

6. A list was compiled of all personnel and agencies associated with the recovery or curation of materials belonging to the Navy's EFA West and/or EFA Northwest facilities.

7. From this information, a list was generated of facilities, agencies, museums, and private individuals that were to be visited for this project.

Field Inspection and Assessments of Repositories and Collections

Assessment of the archeological collections and the repositories that house them involved the following four major tasks.

1. A survey questionnaire was completed for every facility involved with the curation of EFA West and/or EFA Northwest archeological collections. The questionnaires solicited information on repositories, registration procedures, written policies and procedures, artifact collections, and associated documentation.

2. A building evaluation facilitated the determination of whether or not the facility was in compliance with the requirements for repositories specified in 36 CFR Part 79. Forms addressed such topics as structural adequacy, space utilization, environmental controls, security, fire detection and suppression, pest management, and utilities. Data were gathered both by observation and through discussion with collections and facilities managers.

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

4. Artifact collections were examined and evaluated as to their condition and compliance with 36 CFR Part 79. Assessment included examination of the conditions of primary and secondary containers, the degree of container labeling, the extent of laboratory processing, the material classes included in each collection, and the condition and approximate minimum number of individuals of any human skeletal remains. Primary containers are generally cardboard boxes. Secondary containers are those included within the primary container, and they are composed of a much wider range of materials. Secondary containers examined included, but were not limited to, acidic-paper bags, plastic bags, glass vials, plastic film canisters, aluminum foil, newspaper, smaller acidic-cardboard trays, and nonarchival foam packing.

NAGPRA-Compliance Assessment

In order to comply with the requirements of NAGPRA, the following tasks were identified as needing to be performed at each repository holding collections recovered from EFA West and EFA Northwest facilities.

1. Search pertinent accession records and catalog cards for identification and physical location of human skeletal remains, associated and unassociated funerary objects, objects of cultural patrimony, and sacred objects.

2. Research associated documentation, including reports, field notes, and records of analyses, and inspect all storage containers to identify human skeletal remains, associated and unassociated funerary objects, objects of cultural patrimony, and sacred objects.

3. Conduct analyses of human skeletal remains that include (1) a detailed inventory listing elements present, and their completeness and condition; (2) measurements of long bones and crania sufficient to provide basic description of the physical characteristics, stature, and morphology of the remains; (3) estimates of age and gender; and (4) observations of any pathological conditions, cultural modifications, or evidence of life activities and trauma that might provide evidence of cultural affiliation of the remains or the context from which they were recovered.

4. Produce summary and inventory reports for each repository.

Report Preparation

1. A written report detailing the results of the curation-needs assessment was required. Estimates of the size, condition, and description of the collections and facilities are included.

2. Recommendations for the rehabilitation of the facilities and/or the collections, according to the standards set forth in 36 CFR Part 79, were to be included. Interpretations of some standards and additional recommendations were to be based on professional museum standards and modern curation practices.

Chapter Synopsis

Chapters 2–29 of this report provide a detailed examination of the state of archeological collections under the jurisdiction of EFA West and EFA Northwest facilities. Each facility is discussed within its own chapter, which contains a summary of collections held by each facility and brief history of the facility, a discussion of the repositories that curate their collections, and a list of all bibliographic references pertaining to work on the facility. Discussions of all non-Navy repositories holding Navy collections are included in Chapters 30–52. Each of the repository evaluations contains a summary of the repository and collections, and recommendations for improved care of the collections. Chapter 53 summarizes the findings of the St. Louis District assessment team, and Chapter 54 presents recommendations for improved care of the collections.

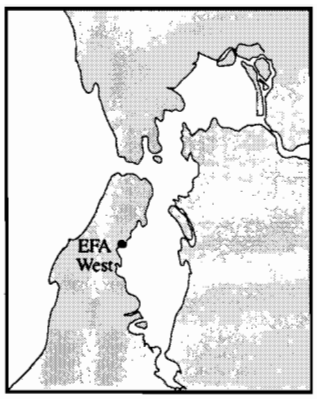
Unfortunately, the conditions of the facilities described in this report reflect the standard of care for archeological collections across the

nation. Lack of funding and lack of consistent national policy, combined with the sheer magnitude of collections across the country, have prevented compliance with federal regulations. A national strategy is needed that addresses existing deficiencies and prevents continued deterioration of the federal government's archeological collections. With this archeological curation-needs assessment the U.S. Department of the Navy has taken the initial step toward preserving a portion of our rich national heritage.

2

Engineering Field Activity, West

San Bruno, California



Facility Summary

Volume of Artifact Collections: None

Linear Feet of Records: 43.2 linear feet
Compliance Status: Records need complete rehabilitation to comply with existing federal standards for modern management of archives.

Human Skeletal Remains: None

Status of Curation Funding: No funds have been specifically designated for curation.

Status of Facility Repository: No dedicated repository has been established.

NAGPRA Status: Not applicable

Collection Update (October 1997): A computerized database-management system for cultural resource management files, reports, photographs, etc., was developed and implemented for use in 1995.

Dates of Visits: March 10–11, 1993, and July 18, 1994

Points of Contact: Patricia Duff, archeologist/environmental protection specialist, and Lou Wall, cultural resource program manager (CRPM)

EFA West is responsible for overseeing the archeological work that takes place on Navy-owned land within the EFA West footprint. At the request of EFA West, curation-needs assessments of the EFA Northwest facilities were also performed. Administrative documents and reports on file at EFA West pertaining to activities in the states of California and Nevada were evaluated by St. Louis District personnel.

During the time of the assessment, associated records were located in Building 105, a two-story office building that houses the modular offices of the Environmental Planning Branch, EFA West. The 12,644-ft^2 building, which was built in 1942, was originally used as a World War II barracks and office building. Record collections are stored in two offices on the first floor. Approximately 50 percent of the records were assessed during each site visit.

Assessment

Structural Adequacy

Building 105 (Figure 1) is a wood-frame structure with a concrete foundation and stucco exterior walls. The tar-and-gravel roof was last

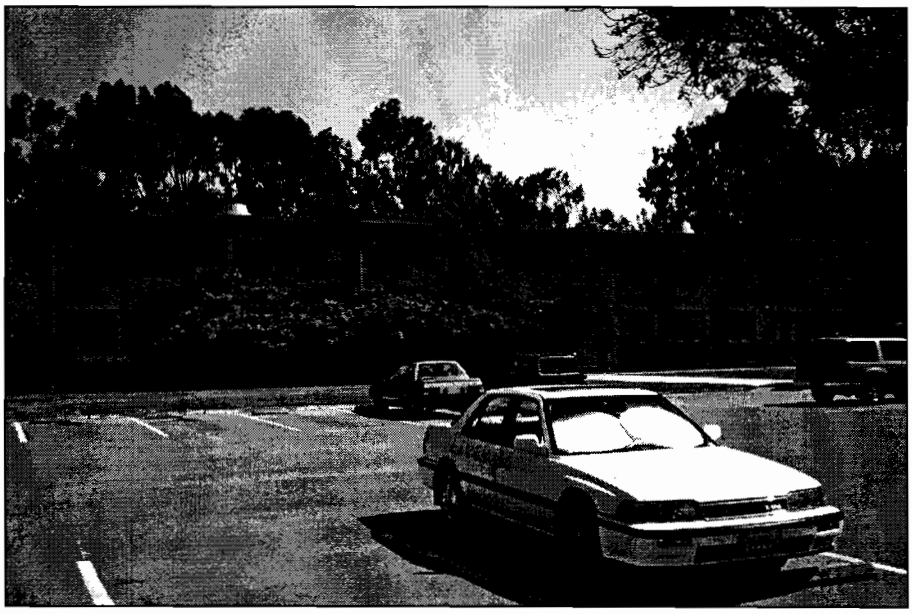


Figure 1. Exterior view of Building 105, which houses the EFA West offices.

replaced in 1976. Cracks in the foundation were noted; however, no leaks have been reported. The floor is wood, covered with asbestos tiles and carpet. Interior walls are plasterboard. The ceiling comprises a double layer of suspended acoustical tiles. Newer tiles were placed over the old ceiling. Rows of double-hung windows are on all four sides of the building. Windows have venetian blinds. There is no evidence that indicates water has leaked through the windows. Support utilities/rooms include electric heat, rest rooms, and telephones. The original plumbing was updated in the 1970s and again in 1984. The electricity and heating have also been updated. Overhead pipes are present in the report storage areas, but are not exposed. Water damage from a leak in the second-floor rest room down the hall was noted on the ceiling tiles. Renovations to the building currently are underway.

Environmental Controls

Temperature controls include baseboard units, electric heaters, and fans. No air-conditioning system has been installed. The humidity is neither monitored nor controlled. No dust-filtration system is employed. The building is regularly cleaned at least five times per week by a professional cleaning company arranged through the Public Works Center, San Francisco Bay. Lighting is provided by desk lamps, fluorescent lamps, and natural light; no ultraviolet filters are used.

Pest Management

Precautions against pests include spraying lawns. No signs of infestation were noted. An integrated system for pest management is not employed.

Security

The building has key locks and controlled access. The compound is surrounded by a fence and has 24-hour security at the gate. No evidence of unauthorized access in this building was apparent. Of the 61 windows, 52 can be reached from the ground. These have latch locks.

Fire Detection and Suppression

Fire extinguishers, last inspected in March 1994, were located at the front entrance, the east and west exits, and near the entry to the second floor. Manual fire alarms are present, but are not in working order.

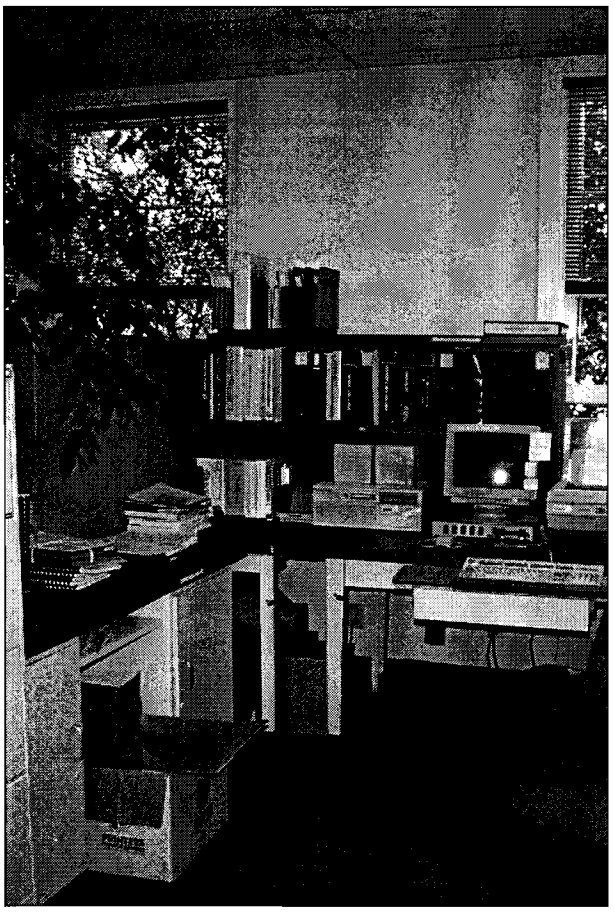


Figure 2. Shelves in the archeologist's office where archeological documentation is stored for EFA West.

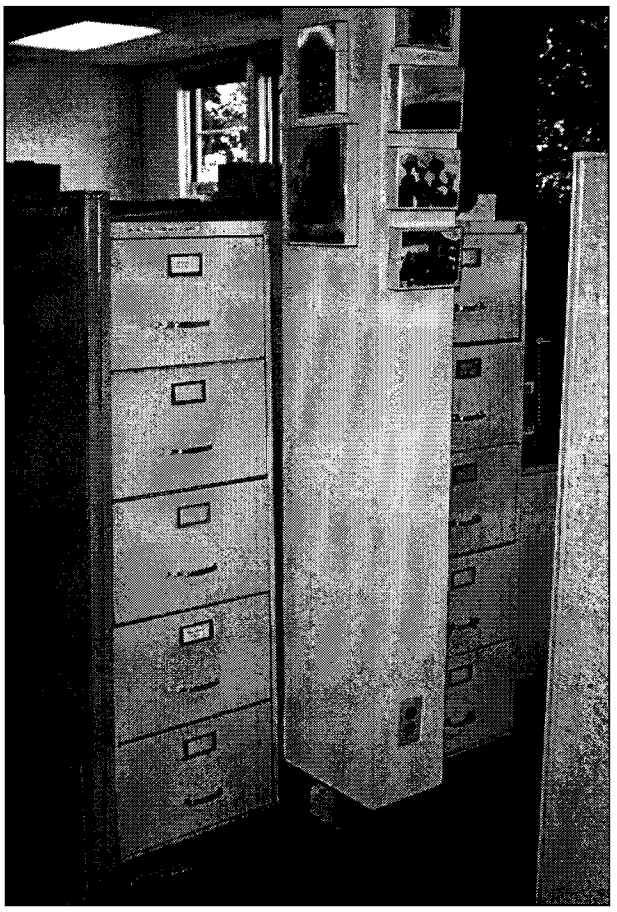


Figure 3. File cabinets in the archeologist's office at EFA West where documentation is stored.

Records Storage

Records are stored in the archeologist's and cultural resource program manager's cubicles, each of which measures 9 x 12 feet. Types of records assessed included reports, background material, and administrative records. No audio-visual or machine-readable records were assessed. At the time of the assessment, no database system was employed for management of the record collections. Storage units in the archeologist's office include two legal-size, five-drawer, metal filing cabinets, other filing cabinets, map filing cabinets, shelves, and boxes (Figures 2 and 3). The filing cabinets are labeled with acidic paper inserted into metal holders. Storage units in the CRPM's office include two legal-size, five-drawer, unlabeled filing cabinets and a lateral filing cabinet (Figure 4). Master plans are located in a second-floor library that was not assessed. Storage for both offices is at 100-percent capacity. File folders are acidic, and contaminants are present on the original documentation.

Paper Records

Paper records present include correspondence, background materials, and contracts. Records in the archeologist's office include 4.3 linear feet of current files, 13 linear feet of Mare Island archeological files, and 4.3 linear feet of background materials and laws. Compliance-related files are located in a five-drawer filing cabinet in the CRPM's office. His contract reports are located in another five-drawer filing cabinet.

Reports

Reports were found filed with the other paper records in the archeologist's office. They were filed on metal shelves, on a wooden desk top, and in an acidic box with a folding lid. Active files are labeled using acidic paper that is placed in the file cabinet's label holder. In the CRPM's office, reports are kept in two, five-drawer, legal-size, metal filing cabinets. Cabinets are not labeled. Draft reports are not kept once final copies are received.

Collections-Management Standards

EFA West is not viewed as an official curation facility. Therefore, collections-management standards have not been addressed in this report.

Comments

1. Proper environmental conditions are not maintained to ensure adequate long-term storage conditions for associated documentation.

2. Building 105 does not have adequate fire-detection and -suppression systems installed to protect records.

3. An integrated pest-management system is not in place.

4. Record collections have not been processed according to federal guidelines and modern archival standards.

5. Improper storage and contaminants lead to premature deterioration of documents.

6. Duplicate copies of associated documentation have not been produced on acid-free paper.

7. Staff do not have sufficient storage space for records.

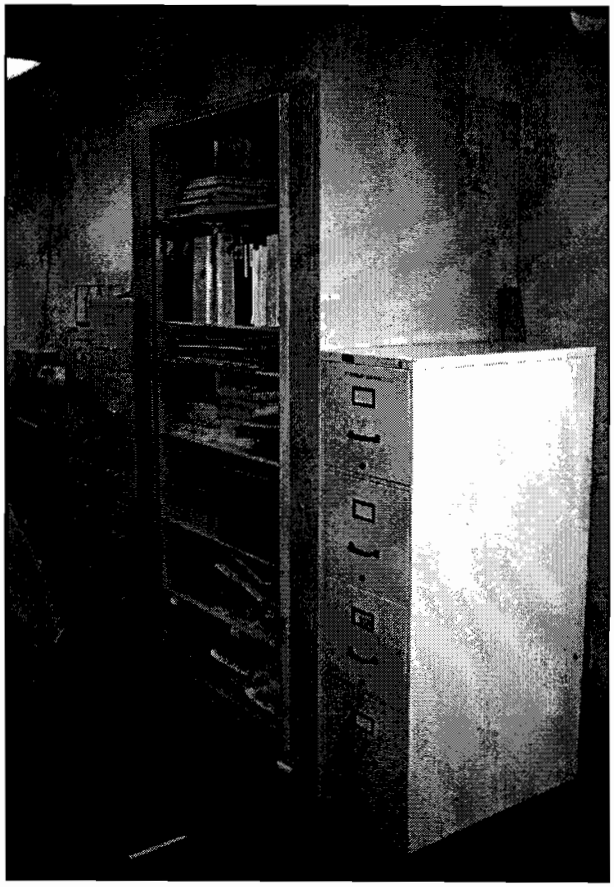


Figure 4. Metal storage units in the CRPM's office at EFA West house associated records.

Recommendations

1. Install an HVAC system and a dust-filtration system.

2. Install a sprinkler system, in conjunction with heat sensors or smoke detectors.

3. Develop and implement an emergency-management plan.

4. Employ an integrated pest-management system.

5. Dedicate more space for the proper storage of record collections.

6. Develop a finding aid for record collections, and employ a computerized database system to manage collections.

7. Remove all contaminants from records.

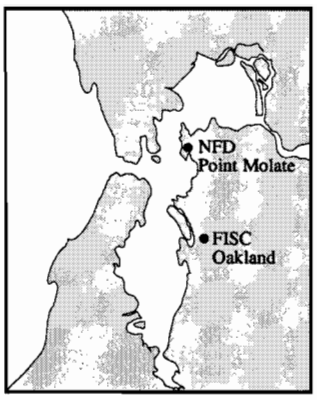
8. Duplicate original records onto archival paper, and store in acid-free folders placed within acid-free boxes.

9. Store copies in a safe, separate, fireproof location.

3

Fleet and Industrial Supply Center

Oakland, California



Facility Summary

Volume of Artifact Collections: 2.9 ft^3
On Base: None
Off Base: 2.9 ft^3 of archeological materials from NFD Point Molate are curated at the Phoebe Hearst Museum (see Chapter 45).
Compliance Status: Collections will require complete rehabilitation to comply with federal guidelines and standards for archeological curation.

Linear Feet of Records: < 1 linear foot
On Base: None
Off Base: < 1 linear foot of associated records materials from NFD Point Molate are curated at the Phoebe Hearst Museum (see Chapter 45).
Compliance Status: Documentation will require partial rehabilitation to comply with federal standards and guidelines for archival preservation.

Human Skeletal Remains:
On Base: None
Off Base: None assessed. However, Phoebe Hearst Museum catalog records indicate that they are curating the remains of at least 17 individuals, collected by Driver and Treganza in 1938 and 1939, from site CA-CCO-283. Because the land on which Point Molate is situated was acquired in 1941, these materials are not the responsibility of NFD Point Molate.

Status of Curation Funding: Curation activities are underfunded.

Status of Facility Repository: No dedicated repository has been established.

NAGPRA Status: A NAGPRA Section 5 inventory may be necessary; the St. Louis District team was unable to assess all of NFD Point Molate, archeological materials.

Collection Update (October 1997): A bibliographic reference, published since the date of the assessment, has been added.

FISC Oakland was established in 1941 as the Oakland Naval Supply Depot. At the height of activity, more than 16,000 personnel were assigned to the facility. In 1947 it was redesignated the Naval Supply Center. Today, it is the home of the Navy's prototype computerized warehouse, which is operated using the Naval Integrated Storage Tracking and Retrieval System (NISTARS). FISC Oakland, located in Alameda County, covers approximately 1,100 acres

and was constructed on landfill. Major units under the command of FISC Oakland include NFD Point Molate in Contra Costa County and the Alameda Annex/Facility in Alameda County. The Base Realignment and Closure Act, as amended in 1993, mandated the closure of this facility. The Navy is in the process of closing operations and disposing of the property.

The land for the present Naval Fuel Depot at Point Molate was acquired in 1941, and the facility was commissioned as NFD Point Molate, on April 12, 1943. NFD Point Molate became a U.S. Naval Fuel Annex on November 15, 1960, and was placed under FISC command. In 1973, the operation of the fuel facilities at NFD Point Molate was transferred from the Navy to the Defense Supply Logistics Agency as part of an integrated petroleum-management plan.

Archeological materials and associated records have been generated from archeological investigations at NFD Point Molate. A March 1994 records search at the Northwest Archaeological Information Center revealed that four sites are located on NFD Point Molate: CA-CCO-282, CA-CCO-283, CA-CCO-422H, and CA-CCO-423. During telephone interviews conducted to locate the archeological materials recovered from these sites, it became clear that historical-period artifact collections had been recovered from NFD Point Molate in 1985 during a cultural resources investigation conducted by David Chavez and John Holson. In a letter from Chavez dated September 13, 1993, he states that the collections from NFD Point Molate are being curated at the Richmond Museum, Richmond, California. After several telephone conversations with Richmond Museum personnel, we were unable to determine the locations of these archeological collections or records. However, collections recovered from Point Molate between 1910 and 1951 are located at the Phoebe Hearst Museum (see Chapter 45).

A complete assessment of all NFD Point Molate archeological materials and associated records curated at the Phoebe Hearst Museum should be performed, and the locations of the collections made by Chavez and Holson in 1985 need to be determined. Approximately 3.5 ft^3 of archeological materials from NFD Point Molate (CA-CCO-282, CA-CCO-283, or both) are curated in Crate 134 at the Marchant Building, an off-site storage facility of the Phoebe Hearst Museum. These materials, which are not included in the 2.9 ft^3 from NFD Point Molate, were not assessed because the electronic lift that moves the crates from shelves to the floor was not charged at the time of our visit.

Reports Related to Archeological Investigations at FISC Oakland and NFD Point Molate

Chavez, David
1981 *Cultural Resources Assessment for Replacement of Water Distribution System, Point Molate, Richmond, California.* Submitted to VHS Associates, San Rafael, California.

1987 *Archaeological Monitoring for Oil Spill Prevention Project—Point Molate Fuel Depot (Project P-075): Summary Report of Archaeological Finds at the Intersection of Line A and Line B.*

Chavez, David, and John Holson
1985 *Cultural/Archaeological Resources Investigation at the Naval Supply Center Fuel Depot Department, Point Molate, Contra Costa County, California.* David Chavez and Associates. Submitted to the Navy Public Works Center, San Francisco Bay, Oakland Army Base, Oakland, California.

Maniery, M. L., C. Baker, and K. Syda
1996 *An Archeological Evaluation of the Fleet Industrial Supply Center Alameda Annex/Facility and Naval Air Station Housing (East and North), Alameda County, California.* Submitted to Engineering Field Activity, West, Naval Facilities Engineering Command, San Bruno, California.

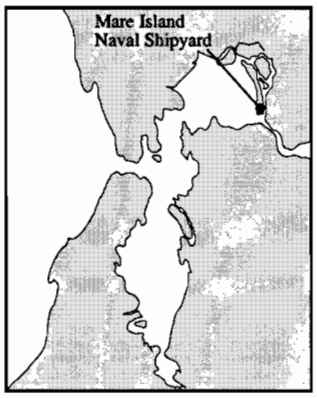
Rippey, Deborah A., and Adrian Praetzellis
1990 *An Archaeological Survey of an Approximately 10-Acre Parcel Located at the Naval Fuel Supply Depot, Point Molate, Contra Costa County, California.* On file, Northwest Archaeological Information Center, Sonoma State University, Rohnert Park, California.

Rosco, James M.
1980 *An Archaeological Survey of an Approximately 1-Acre Parcel Located at the Point Molate Naval Fuel Supply Depot.* On file, Northwest Archaeological Information Center, Sonoma State University, Rohnert Park, California.

4

Mare Island Naval Shipyard

Vallejo, California



Facility Summary

Volume of Artifact Collections: 1 ft^3
On Base: None
Off Base: 1 ft^3 (Archaeological Resource Services [ARS], Petaluma, California; see Chapter 31)
Compliance Status: Collection will require complete rehabilitation and transfer to an appropriate curation facility.

Linear Feet of Records: 3.3 linear feet
On Base: None
Off Base: 3.3 linear feet (ARS; see Chapter 31)
Compliance Status: Records will require complete rehabilitation to comply with existing federal guidelines and modern archival standards.

Human Skeletal Remains: None

Status of Curation Funding: No funds are appropriated for long-term curation.

Status of Facility Repository: Mare Island Naval Shipyard does not have a dedicated repository for the curation of archeological collections. Collections and associated documentation are temporarily stored at the offices of ARS (see Chapter 31).

NAGPRA Status: Based on present information, no NAGPRA Section 5 inventory is necessary.

Collection Update (October 1997): Bibliographic references published since the date of the assessment have been added.

Mare Island Naval Shipyard, located in Solano County, is the oldest naval base on the West Coast. It encompasses major units consisting of the Naval Shipyard, Marine Corps Security Force, Combat Systems Technical Schools Command, Explosive Ordnance Detachment, and Mobile Unit Nine. Mare Island has the first and only docking and repair facilities for Pacific commerce, including the Navy's Pacific Squadron, New England whalers, Cape Horn clippers, and gold-carrying Nicaraguan steamers. Mare Island was purchased by the federal government in 1852; construction of the shipyard began in 1854. Mare Island is a National Historic Landmark and contains the oldest naval chapel in the United States. During the Civil War, the base had a naval hospital, a marine barracks, and a naval ammunition depot. By World War II, Mare Island had become one of the world's largest shipbuilding and repair facilities. In more recent

times, the naval base has specialized in the refueling and overhaul of Navy submarines. The Base Realignment and Closure Act, as amended in 1993, mandated the closure of this facility. Operations closed in 1996. The Navy is in the process of disposing of the property.

In March 1994, St. Louis District personnel performed background archeological research at the Northwest Archaeological Information Center, Sonoma State University, Rohnert Park, California, which included a review of all pertinent archeological site forms, reports, and manuscripts. Archeological sites have been recorded on Mare Island, and a number of reports has been generated as the result of archeological investigations there. Archeological collections are temporarily housed at ARS.

Reports Related to Archeological Investigations at Mare Island Naval Shipyard

Allan, James, and William Self
1996a *Prehistoric Archeological Context Statement and Site Prediction Model, Mare Island Naval Shipyard, Vallejo, California.* William Self Associates. Submitted to Engineering Field Activity, West, Naval Facilities Engineering Command, San Bruno, California.

1996b *Evaluation of Prehistoric Archeological Resources, Mare Island Naval Shipyard, Vallejo, Solano County, California.* William Self Associates. Submitted to Engineering Field Activity, West, Naval Facilities Engineering Command, San Bruno, California.

Brown, Jody L., and Mary L. Maniery
1994 *Cultural Resources Monitoring and Site Evaluation for the Saltwater Fire Suppression System, Mare Island Naval Shipyard, Vallejo, Solano County, California.* PAR Environmental Services, Sacramento, California. Submitted to Engineering Field Activity, West, Naval Facilities Engineering Command, San Bruno, California, Contract No. N62474-94-M-7432.

Flynn, Katherine
1980 *Cultural Resource Survey on Mare Island Naval Reserve, Solano County, California. Archaeological Resource Services.* Archaeological Resource Services, Petaluma, California. Submitted to the Interagency Archeological Services Division, National Park Service, San Francisco.

Maniery, Mary, with Cindy Baker
1995 *Predictive Historic Archeological Sites Model for the Mare Island Naval Shipyard, Vallejo, Solano County, California.* Submitted to Engineering Field Activity, West, Naval Facilities Engineering Command, San Bruno, California.

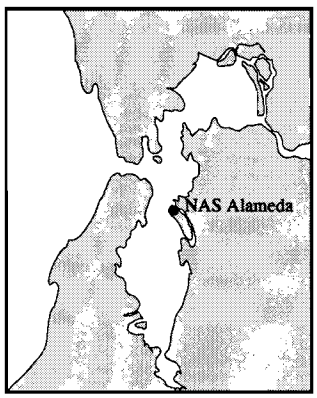
Roop, William
1984 *Archaeological Element of the Environmental Assessment of the United States Navy Homeporting Study, Mare Island, California.* Archaeological Resource Services, Petaluma, California.

Roop, William, and Katherine Flynn
1986 *Mare Island Archaeological Resources Inventory* (first complete draft). Archaeological Resource Services, Petaluma, California. Submitted to the Department of the Navy, Engineering Field Activity, West, San Bruno, California, Contract No. N62474-81-C-1052.

5

Naval Air Station

Alameda, California



Facility Summary

Volume of Artifact Collections: None

Linear Feet of Records: None

Human Skeletal Remains: None

Status of Curation Funding: Not applicable

Status of Facility Repository: Not applicable

NAGPRA Status: Not applicable

Collection Update (October 1997): Bibliographic references published since the time of the assessment have been added.

NAS Alameda, located in Alameda County, was established in 1936 when the city of Alameda gave the federal government the land on which the station was built. Encompassing 2,842 acres, the station is located on the east side of San Francisco Bay, just south of Oakland, California. NAS Alameda was constructed on land reclaimed from San Francisco Bay. The Base Realignment and Closure Act, as amended in 1993, mandated the closure of this facility. The Navy is in the process of disposing of the property.

In March 1994, St. Louis District personnel performed background archeological research at the Northwest Archaeological Information Center, Sonoma State University, Rohnert Park, California, which included a review of all pertinent archeological site forms, reports, and manuscripts. As of this date, no archeological materials have been recovered from NAS Alameda.

Reports Related to Archeological Investigations at NAS Alameda

Gerike, Christian
1981 *Naval Air Station Alameda: Archaeological Records Search for Naval Air Station Alameda.* Northwest Archaeological Information Center, Sonoma State University, Rohnert Park, California.

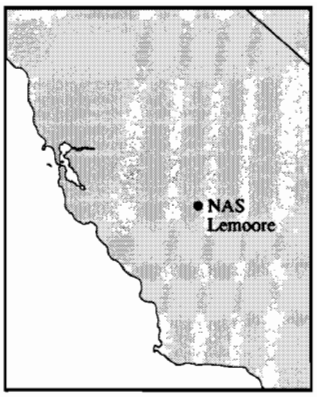
Maniery, Mary L., Cindy C. Baker, and Keith Syda
1996 An Archeological Evaluation of the Fleet Industrial Supply Center—Alameda Annex/Facility and Naval Air Station, Alameda Family Housing (East and North). Alameda County, California. Submitted to Engineering Field Activity, West, Naval Facilities Engineering Command, San Bruno, California.

Roop, William
1984 *Archaeological Element of the Environmental Assessment of the United States Homeporting Study.* Naval Air Station, Alameda, California, and Naval Supply Center, Oakland, California.

6

Naval Air Station

Lemoore, California



Facility Summary

Volume of Artifact Collections: None

Linear Feet of Records: None

Human Remains: None

Status of Curation Funding: Not applicable

Status of Facility Repository: Not applicable

NAGPRA Status: Not applicable

Collection Update (October 1997): A bibliographic reference published since the date of the assessment has been added.

NAS Lemoore encompasses 18,000 acres, 12,000 of which are currently leased to farmers. Located 40 miles south of Fresno, in Kings and Fresno Counties, NAS Lemoore is located in the San Joaquin Valley of central California. Construction began in 1958 near the Lemoore Army Airfield, which was active during World War II. In 1961, NAS Lemoore was commissioned and originally named Reeves Field, in honor of Rear Admiral Joseph M. Reeves. Groundwork was laid for the modern aircraft-carrier strike force. Today, the primary missions of NAS Lemoore are to support fleet-carrier squadrons and to serve as the master training center for carrier-based light attack squadrons of the U.S. Pacific Fleet.

In March 1994, St. Louis District personnel performed background archeological research at the Southern San Joaquin Valley Archaeological Information Center, California State University, Bakersfield, which included a review of all pertinent archeological site forms, reports, and manuscripts. As of this date, no archeological collections or NAGPRA-related materials have been recovered from NAS Lemoore.

Reports Related to Archeological Investigations at NAS Lemoore

Milliken, Randall, and Stephen Mikesell
1996 *Historic and Archeological Resources Protection Plan for the Years 1996–2001.* Submitted to Engineering Field Activity, West, Naval Facilities Engineering Command, San Bruno, California.

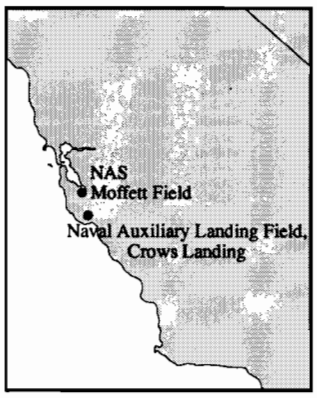
Naval Facilities Engineering Command
1983 *Naval Air Station Lemoore Master Plan.*

Yohe, Robert M.
1991 *An Archaeological Assessment of Approximately 300 Acres of Land on the U.S. Naval Air Station, Lemoore, Kings County, California.* Submitted to the Department of Public Works, Environmental Branch, Naval Air Station, Lemoore, California.

7

Naval Air Station

Moffett Field, California



Facility Summary

Volume of Artifact Collections: 4 ft^3
On Base: None
Off Base: 4 ft^3 (Basin Research Associates [see Chapter 32] and the Phoebe Hearst Museum [see Chapter 45]).
Compliance Status: Collections will require complete rehabilitation to comply with federal guidelines and standards for archeological curation.

Linear Feet of Records: < 1 linear foot
On Base: None
Off Base: < 1 linear foot (Basin Research Associates; see Chapter 32) and the Phoebe Hearst Museum (see Chapter 45).
Compliance Status: Records will require complete rehabilitation to comply with federal guidelines and standards for archival preservation.

Human Skeletal Remains: None

Status of Curation Funding: Curation is not funded.

Status of Facility Repository: Moffett Field had no dedicated space for archeology. The installation closed in 1994.

NAGPRA Status: Based on the present information, no NAGPRA Section 5 inventory is necessary.

Collection Update (October 1997): Collections housed at Basin Research Associates have been transferred to San Francisco State University's Tiburon Archaeological Research Group. Associated documentation regarding the installation was transferred from Basin Research Associates to EFA West (see Chapter 2). A bibliographic reference, published since the date of the assessment, has been added.

NAS Moffett Field encompasses 3,000 acres, approximately 34 miles south of San Francisco in Santa Clara County. In 1933, the base was commissioned as Sunnyvale Naval Air Station. It was renamed in 1942, in honor of Rear Admiral William A. Moffett. Historic Hangar #1 was built to house the dirigible USS Macon in 1933. It was used during World War II with Hangars #2 and #3, built in 1942, to house blimps used for coastal patrol. In the base's most recent history, it served as a hub for antisubmarine-warfare patrol operations in the Pacific and was the largest P-3 Orion base. The base was decommissioned and transferred to the National Aeronautic and Space Administration (NASA) in 1994.

In March 1994, St. Louis District personnel performed background archeological research at the Northwest Archaeological Information Center, Sonoma State University, Rohnert Park, California, which included a review of all pertinent archeological site forms, reports, and

manuscripts. Archeological sites (CA-SCL-12H, -14, -15, -16, -17, -18H, -19, -20, -21, -24) have been recorded on NAS Moffett Field, and a number of reports has been generated as a result of archeological investigations. According to the official state site files, no archeological materials have been recovered from Naval Auxiliary Landing Field, Crows Landing, a practice landing field in San Joaquin Valley operated by NAS Moffett Field, which is now under the control and jurisdiction of NASA.

Presently, archeological materials, consisting of approximately 3.0 ft^3 of prehistoric lithics and worked bone and shell, from NAS Moffett Field are housed at the Phoebe Hearst Museum (see Chapter 45). Collections, consisting of approximately 1 ft^3 of soil samples, were also housed at Basin Research Associates (see Chapter 32) at the time of the assessment.

Reports Related to Archeological Investigations at NAS Moffett Field

Archaeological Resource Services
1987 Letter report to Stephen Noack, Land Use, c/o Creegan-D'Angelo, Pleasanton, California, regarding archeological and historical evaluation of NAS Moffett Field, Santa Clara County, California. Manuscript on file, Basin Research Associates, San Leandro, California.

Baker, Suzanne
1991 *Addendum to Archaeological Survey Report Tasman Corridor Project, Santa Clara County, California. Archaeological Testing at CA-SCL-20 and CA-SCL-38.* Archaeological/Historical Consultants. Submitted to Woodward-Clyde Consultants.

Chavez, David
1980 Letter report to Tom Crews, EIP Corporation, San Francisco, California, regarding cultural resources evaluations for the Proposed Navy Housing Locations at Moffett Field, Santa Clara County, California.
1980 *Archaeological Investigation of the Proposed Construction Site for Lockheed Building 157, Sunnyvale, California.* Report on file, Northwest Archaeological Information Center, Sonoma State University, Rohnert Park, California.
1981 *Cultural Resources Evaluation for the Moffett Field Storm Drainage, Santa Clara County, California.* Environmental assessment submitted to Madron Associates.

David Chavez & Associates
1981 *Cultural Resources Evaluation for the Proposed Navy Housing Location at Moffett Field, Santa Clara County, California.* Submitted to the EIP Corporation, San Francisco.

Garaventa, Donna M., and Rebecca L. Anastasio
1991 *Archaeological Overview and Survey Naval Air Station Moffett Field, Santa Clara County, California and Naval Auxiliary Landing Field Crows Landing, Stanislaus County, California.* Submitted to Basin Research Associates, San Leandro, California, for Western Division Naval Facilities Engineering Command, San Bruno, California.

Garaventa, Donna M., Stuart A. Guedon, Deborah M. DiPasqua, and Conrad F. Praetzel
1993 *CA-SCL-23 and Vicinity for the National Wind Tunnel Complex (NWTC), NASA Ames Research Center, Moffett Field, Santa Clara County, California.* Basin Research Associates, San Leandro, California.

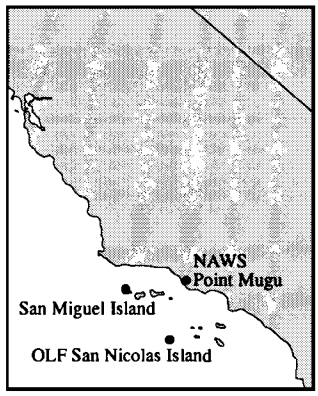
Garaventa, Donna M., Stuart A. Guedon, David G. Britton, Ranbir S. Sidhu, and Deborah M. DiPasqua
1993 *CA-SCL-23 For the New Outdoor Aerodynamic Research Facility (OARF) Road, NASA Ames Research Center, Moffett Field, Santa Clara County, California.* Basin Research Associates, San Leandro, California.

William Self Associates
1990 *Cultural Resources Survey Report for Proposed Commissary Building, Naval Air Station, Moffett Field, Santa Clara County, CA.* William Self Associates, Orinda, California. Submitted to Western Division Naval Facilities Engineering Command, San Bruno, California.

8

Naval Air Weapons Station

Point Mugu, California



Facility Summary

Volume of Artifact Collections: 799.2 ft^3

On Base: 212 ft^3 (OLF San Nicolas Island)

Off Base: 587.2 ft^3 are housed at the following locations: Antelope Valley Indian Museum (see Chapter 30), CSULA (see Chapter 33), CVMH (see Chapter 34), CINP (see Chapter 35), the Phoebe Hearst Museum (see Chapter 45), the Lompoc Museum (see Chapter 36), NHMLAC (see Chapter 37), SDMM (see Chapter 40), SBMNH (see Chapter 41), the Southwest Museum (see Chapter 44), UCLA (see Chapter 46), UCSB (see Chapter 47), and the Ventura County Museum (see Chapter 50).

Compliance Status: Collections require varied degrees of rehabilitation to comply with existing federal guidelines and standards for archeological curation.

Linear Feet of Records: 34.1 linear feet

On Base: 16.5 linear feet (OLF San Nicolas Island)

Off Base: 17.6 linear feet are housed at the following locations: Antelope Valley Indian Museum (see Chapter 30), CSULA (see Chapter 33), the Carpinteria Museum (see Chapter 34), CINP (see Chapter 35), the Phoebe Hearst Museum (see Chapter 45), the Lompoc Museum (see Chapter 36), NHMLAC (see Chapter 37), RMW (see Chapter 39), SDMM (see Chapter 40), SBMNH (see Chapter 41), the Southwest Museum (see Chapter 44), UCLA (see Chapter 46), UCSB (see Chapter 47), and the Ventura County Museum (see Chapter 50).

Compliance Status: Records collections will require nearly complete rehabilitation to comply with existing federal guidelines and standards for modern archival preservation.

Human Skeletal Remains: 233 ft^3

On Base: 31 ft^3 (OLF San Nicolas Island)

Off Base: 202 ft^3 are housed at the following locations: The Phoebe Hearst Museum (see Chapter 45), NHMLAC (see Chapter 37), SDMM (see Chapter 40), SBMNH (see Chapter 41), the Southwest Museum (see Chapter 44), UCLA (see Chapter 46), and UCSB (see Chapter 47).

Status of Curation Funding: Curation activities are underfunded.

Status of Facility Repository: NAWS Point Mugu has designated a building on OLF San Nicolas Island as the facility repository. This repository will require rehabilitation to comply with existing federal guidelines and modern archival standards.

NAGPRA Status: All human remains need to be inventoried to comply with the Section 5 requirements of NAGPRA.

Collection Update (October 1997): NAGPRA Section 5 Inventories were completed in May 1996. The San Nicolas Island repository now has approximately 600 ft^3 of collections.

Date of Visit: January 11–18, 1994

Point of Contact: Steven J. Schwartz, archeologist

NAWS Point Mugu encompasses 4,500 acres in Ventura County, and is located approximately 50 miles northwest of Los Angeles. NAWS Point Mugu was established in 1946, and is the site of the first missile launch, the LOON. In 1958, NAWS Point Mugu was designated a national range. Since then, the facilities have been used for several programs by the Air Force, Army, Marine Corps, and NASA. More missiles have been launched there than from any other major test range.

In March 1994, St. Louis District personnel performed background archeological research at the Central Coastal Information Center, UCSB, and the South Central Coastal Information Center, UCLA, which included a review of all pertinent archeological site forms, reports, and manuscripts. Archeological sites have been recorded on NAWS Point Mugu, the OLF San Nicolas Island, and San Miguel Island. A number of reports has been generated as the result of these archeological investigations. Archeological collections are temporarily housed in more than 10 locations in California.

Under the jurisdiction of NAWS Point Mugu are OLF San Nicolas Island and San Miguel Island. San Nicolas, one of the southern Channel Islands off the coast of Los Angeles County, lies 60 air miles from NAWS Point Mugu. The 13,370-acre island is the site of communications and missile tracking equipment operated by the Naval Air Warfare Center Weapons Division. Acquired by the Navy in 1933, San Nicolas Island is one of California's key wildlife preservation areas. San Miguel Island was acquired by the Navy in 1942. It is currently managed by the National Park Service. This small island is one of the northern Channel Islands off the coast of Santa Barbara County.

No collections were identified as having originated from NAWS Point Mugu. However, many collections located in museums throughout the United States and in other countries have originated from San Nicolas and San Miguel Islands. See Table 2 for the California locations of artifacts and human remains from OLF San Nicolas and San Miguel Islands collections.

Two repositories store archeological collections and associated documentation from San Nicolas and San Miguel Islands. On San Nicolas Island, Building 156 is now Repository 1, the archeological collections facility (Figure 5). The repository is a former intelligence building on the island. Repository 2, TR10073, is located on NAWS Point Mugu. It is a temporary building dated to the 1950s that was completely gutted and remodeled in 1991 (Figure 6).

Approximately 193 ft^3 of boxes and 19 ft^3 of drawers (totaling 212 ft^3) of cultural materials from archeological sites on San Nicolas Island are curated in Repository 1. The inspection team physically examined 130 boxes and 17 drawers of cultural materials, totaling approximately 149 ft^3 (70%) of the overall total. See Table 3 for an estimate of the approximate percentages of material classes physically examined.

Twenty-three boxes, totaling approximately 31 ft^3, of human skeletal remains from archeological sites on OLF San Nicolas Island are also curated in Repository 1. The inspection team physically examined all human burials. Associated records consisted of approximately 10 linear feet (115 linear inches) of documentation located at OLF San Nicolas Island, and almost 7 linear feet (82 linear inches) of documentation at NAWS Point Mugu. Approximately 16.5 linear feet of associated archeological documentation was assessed. The inspection team physically examined all of the associated documentation on San Nicolas Island and at NAWS Point Mugu.

Table 2.
Approximate Size of NAWS Point Mugu Collections from OLF San Nicolas Island and San Miguel Island

Repository	San Miguel Island		OLF San Nicolas Island	
	Artifacts	Human Remains	Artifacts	Human Remains
Antelope Valley Indian Museum[a]	~7.5	—	~7.5	—
CSULA	—	—	201.0	—
Carpinteria Museum[b]	0.5	—	0.5	—
Channel Islands National Park Visitor Center	4.1	—	—	—
Phoebe Hearst Museum[c]	1.6	—	19.4	unknown
Lompoc Museum	0.5	—	0.5	—
NHMLAC	83.5	3.0	45.0	4.0
OLF San Nicolas Island	—	—	212.0	31.0
San Diego Museum of Man	1.6	1.0	53.4	52.0
Santa Barbara Museum of Natural History	18.3	4.0	37.2	10.0
Southwest Museum	0.5	0.5	24.5	24.5
UCLA	—	—	16.1	100.0
UCSB	70.5	3.0	—	—
Ventura County Museum of History and Art	—	—	1.0	—
Total	~188.6	11.5	~618.1	221.5

Note: All measurements are in ft^3.
[a]It was impossible to distinguish from which island the collection had been recovered; however, according to the NAWS Point Mugu archeologist, the vast majority are from San Nicolas Island.
[b]This collection was probably recovered before Navy presence on the islands.
[c]The OLF San Nicolas Island human remains were recovered before Navy presence on the island. This information was gathered from the museum's catalog cards.

Figure 5. Exterior view of Building 156, the collections storage facility on OLF San Nicolas Island.

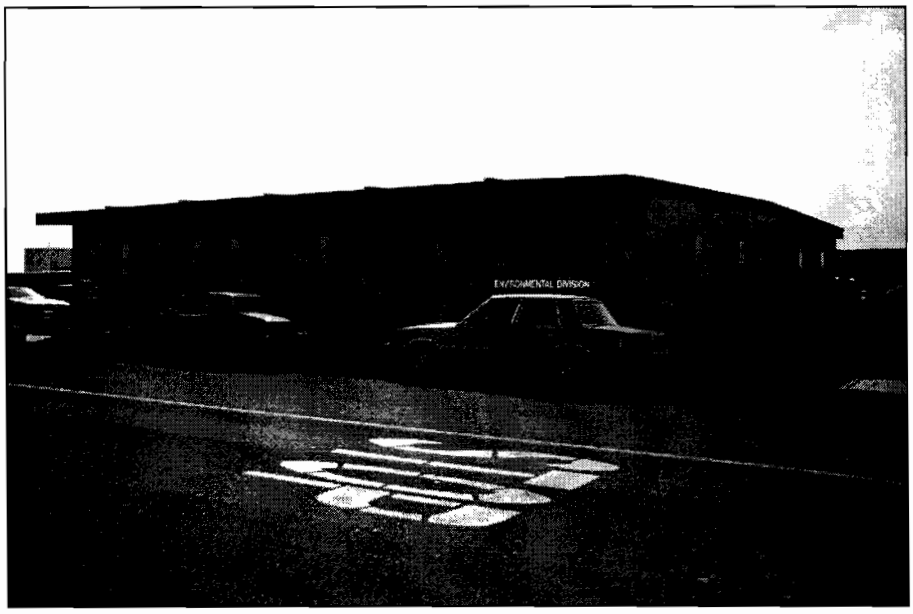


Figure 6. Exterior view of Building TR10073, the Environmental Division offices building at NAWS Point Mugu.

Assessment

Structural Adequacy

Repository 1

Building 156, OLF San Nicolas Island, was constructed in 1959. The building has a foundation of poured concrete and exterior walls of reinforced concrete blocks. The building was acquired in the months prior to the St. Louis District visit. The composite roof is approximately 10 years old. Floors are tile over concrete, and the original walls are concrete block. Newer interior walls are constructed of plasterboard, one of which was recently removed by the current occupants. The building has no windows (Figure 7). Exposed vents were sealed when air-conditioning units were removed. The structure contains a number of rooms, including two collections storage areas, several offices, bedrooms, a kitchen, bathrooms, and several rooms that are currently used for storing field equipment and other materials. Interior renovations include installation of a kitchen, bedrooms, and a full bath.

Repository 2

Building TR10073, NAWS Point Mugu, is an office building with a concrete foundation and exterior walls of plywood with battens and a gunite facing. A tar-paper roof covers this one-story structure. Interior walls are plasterboard, and the ceiling is acoustical tile. The floor is carpeted. Space is used strictly for offices.

Environmental Controls

Repository 1

The repository operates an HVAC system that was already in place (because the building housed intelligence personnel). There are currently no targeted temperature and humidity ranges. Humidity levels are not monitored. The system was not in use at the time of the visit. Electrical equipment is located within close proximity to boxed artifact collections in Collection Storage Area 2 (Figure 8). Fluorescent and incandescent bulbs illuminate the collections storage areas. Navy personnel maintain the building; the maintenance schedule is unknown.

Table 3.
Summary of Material Classes Present in the Assessed OLF San Nicolas Island Collection, by Percentage

Material Class	%
Prehistoric	
Lithics	12
Human remains	13
Faunal remains	3
Shell	25
Botanical	1
Soil	13
^{14}C	2
Textiles	8
Mixed	18
Other[a]	2
Historical-period	
Ceramics	< 1
Glass	1
Metal	< 1
Other[b]	< 1
Total	100

Note: Percentages based on total ft^3 of materials in the assessed collection.
[a] "Other" includes faunal remains, asphaltum, worked shell, bone tools, textiles, and a steatite artifact.
[b] "Other" includes rubber and twine.

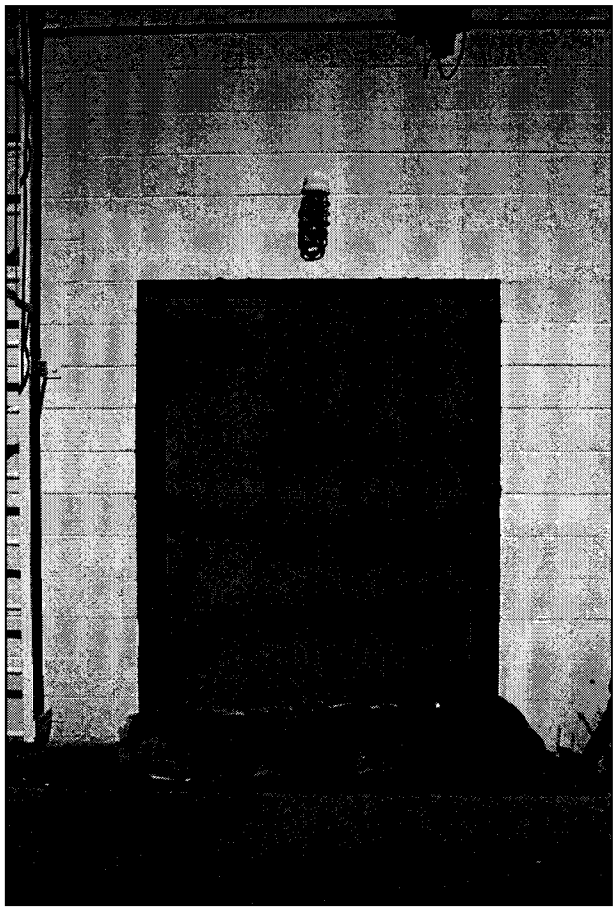


Figure 7. Exterior door on Building 156.

Repository 2

Environmental controls consist of a zoned heating system that has gas-forced air, and a window air conditioner. Temperature is targeted at 68°, but the humidity is neither controlled nor monitored. Unfiltered, recessed, fluorescent lights illuminate the interior.

Pest Management

Repository 1

There is no integrated pest-management plan for this repository. Plans are being developed for a control program that will include use of a pest-management contractor who will visit on an as-yet-undetermined schedule. Some pests noted by the previous occupants of the building were mice, pill bugs, and spiders. During our assessment we noted pill bugs in the hallway and various other bugs transported from the previous facility, including silverfish. In the former facility, pest-management methods included mouse traps and "no-pest strips" for monitoring.

Repository 2

There is no integrated pest-management system for this repository. Pest control is applied on an as-needed basis by Navy personnel. No signs of infestation were detected during the assessment.

Figure 8. Electrical equipment located near artifacts in the collections storage room in Building 156.

Security

Repository 1

A chain-link and barbed-wire fence with a lockable gate surrounds the building, which is already on a restricted island approximately 70 miles off the California coast. Doors have padlocks, and access is controlled. A motion detector was present, but was not activated at the time of visit.

Repository 2

Security measures include controlled access, through base security. The building itself has key locks on the door and locks on the sliding windows.

Fire Detection and Suppression

Repository 1

The entire building contains an elaborate fire-detection and -suppression system that targets areas of the building specified by the previous occupants. A sprinkler system is located throughout the building. Within Collections Area 1, the sprinkler heads extend above the pipelines, which are set a few feet below the ceiling. A large halon tank is also located in Collections Area 1, but it can only be used in other designated rooms (Figure 9). Manual fire alarms are located throughout the entire building. Large high-powered CO_2 tanks are positioned on the walls in one of the collection storage areas and in an office near the front entrance door to the facility. Standard fire extinguishers, which are regularly inspected by the island's fire department, are present at several locations, including one where Collections Areas 1 and 2 meet. An inspection by the fire chief was conducted during the assessment. He discussed the standard fire procedures, provided instructions on the use of the high-powered CO_2 tanks, and warned of the possible hazards during their use.

Repository 2

Fire-safety resources consist of fire extinguishers.

Artifact Storage

Storage Units

Artifacts are stored in two adjoining collections areas on San Nicolas Island, both within Repository 1. Open shelving units constructed of cement blocks and 2-x-8-inch lumber comprise the

majority of the storage units (Figure 10). Additionally, wooden museum cabinets, donated by the SBMNH, have recently been added (Figure 11).

Primary Containers

Primary containers for the collections are standard-size acidic archive boxes with telescoping lids. Labels are printed on acidic paper and placed in plastic, adhesive, sleeves. Primary containers for collections are located in the wooden cabinets and unlined wooden drawers.

Secondary Containers

Artifacts stored in cardboard boxes had 2- and 4-mil plastic zip-lock bags as secondary containers. Artifacts within cabinets were stored loose.

Laboratory Processing and Labeling

Approximately 90 percent of the collections had not been cleaned or labeled.

Records Storage

Approximately 16.5 linear feet of associated documentation are currently divided between Repository 1 (6.83 linear feet) on San Nicolas Island and Repository 2 (9.58 linear feet) on

Figure 9. Large halon tank in the collections storage room in Building 156.

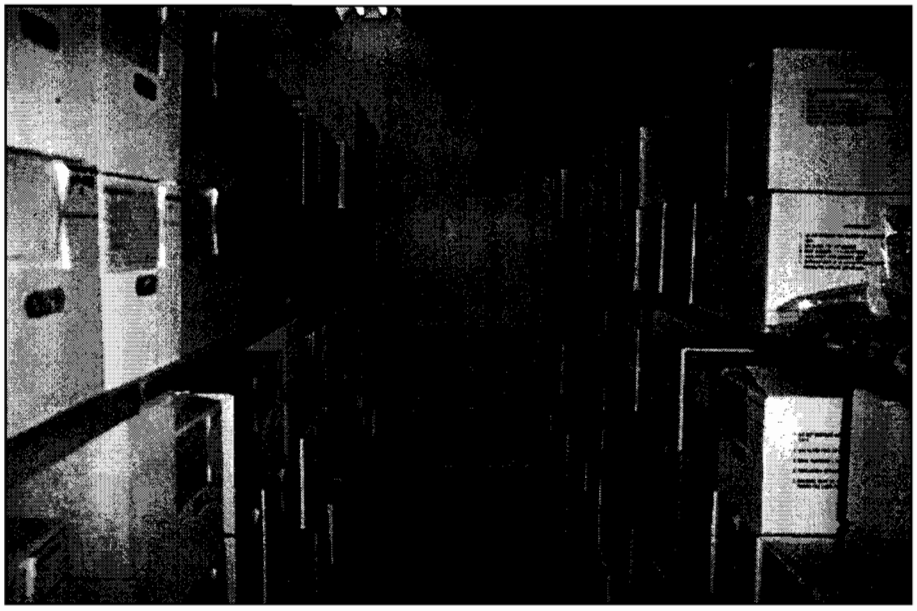


Figure 10. Primary storage containers in the collections storage room in Building 156.

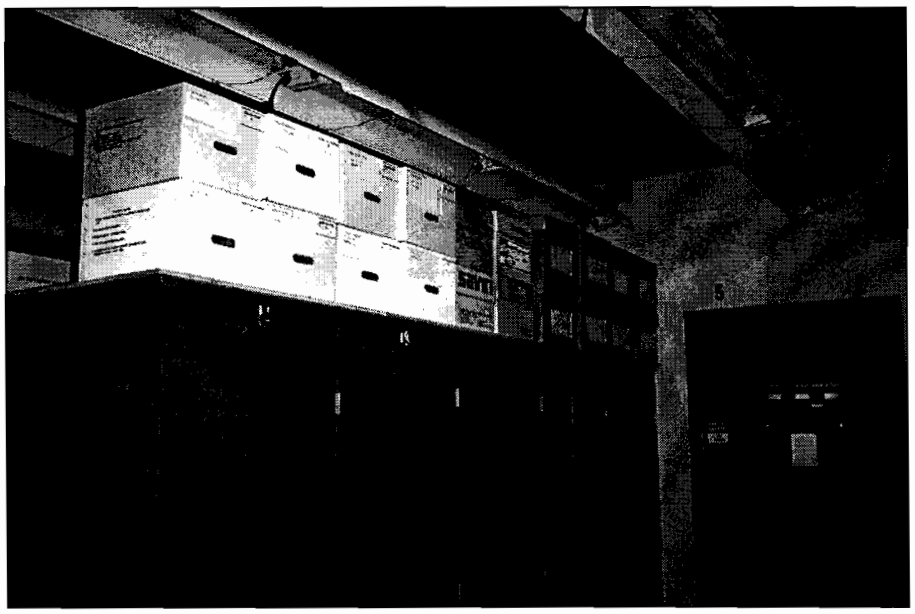


Figure 11. Primary storage containers and wooden storage units for collections storage in Building 156.

NAWS Point Mugu. There are plans to transfer the majority of the documentation from Repository 2 to the collections facility on San Nicolas Island, Repository 1, in the near future.

Paper Records

At Repository 1, paper records include 17 linear inches of field forms, on acidic paper, in three-ring binders. Paper contaminants include rusted metal clasps. Additionally, some of the paper has yellowed. Hardbacked, clothbound, *Federal Issue* journals are also contained in the documentation collection. Photocopies of various museum records from the NHMLAC, pertaining to San Nicolas Island collections, were present; also present were photo logs, site records, and a small-scale map. At Repository 2, photocopies of background material are kept in an acidic-cardboard box. Administrative records are stored in the first drawer of a lateral filing cabinet.

Reports

In Repository 1, the report records consist of background information. All were photocopies of documents written concerning San Nicolas Island, but not all were specifically archeological in nature.

Photographic Records

In Repository 1, a small collection of black-and-white aerial photographs, with a photo log, comprise the small photographic records collection on the island. At Repository 2, photographic records include color slides stored in nonarchival sleeves; additional slides are stored in a three-ring binder. Slides are partially labeled, by site or object. The binder has no label, and there are some loose photographs. There is no finding aid for the collection.

Audiovisual Records

A videotape stored in Repository 2, entitled *Cave of the Whales,* was located in the map cabinet.

Maps and Oversized Documents

Repository 2 houses a metal map case containing a drawer of topographic maps and oversized aerial photographs.

Collections-Management Standards for Both Repositories

Registration Procedures

Accession Files

Artifacts are accessioned, but not immediately upon receipt.

Location Identification

Physical location is identified within the accession file.

Cross-Indexed Files

Files are cross-indexed.

Published Guide to Collections

No published guide has been produced.

Site-Record Administration

A trinomial site-numbering system is employed, and records are organized by site number.

Computerized Database Management

A collections database system is in use and a Geographic Information Systems (GIS) database is being utilized to manage site information.

Written Policies and Procedures

Minimum Standards for Acceptance

There are no official standards for acceptance of archeological materials.

Curation Policy

There is no written curation policy for collections management at NAWS Point Mugu.

Records-Management Policy

No policy for records management exists at NAWS Point Mugu.

Field-Curation Procedures

Procedures are established on a project-by-project basis.

Loan Policy

Loan procedures do not exist.

Deaccessioning Policy

There is no deaccessioning policy.

Inventory Policy

No inventory policy has been created; this should be addressed in the HARP plan.

Latest Collection Inventory

The collection has never been inventoried.

Curation Personnel

Curation personnel include Steven J. Schwartz, and interns from local universities when available. Mr. Schwartz is head of the Environmental Planning branch at NAWS Point Mugu and can devote only a small part of his time to curation activities.

Curation Financing

No funding has been specifically designated for curation. Limited financing has been obtained through overhead funds.

Access to Collections

Access to the collections is very limited, due to the restricted geographic and military nature of the island.

Future Plans

Future plans include making additional improvements to the physical building, including new locks, shelving, lighting, security, researching all records pertaining to the archeology of the island, and maintaining a collection of these materials. Plans also include the labeling of all artifacts, duplicating the paper records, and preparing a HARP plan.

Comments

1. The original function of the facility prompted the construction of a solid building and the installation of highly sophisticated protective systems for the sensitive equipment.

2. Although the building is equipped with many sophisticated fire-detection and -suppression systems, as well as security and climate-control devices, they are not currently in use, and their maintenance is questionable.

3. Several rooms stand empty or nearly empty, suggesting a great capacity for collections storage expansion.

4. Humidity and temperature are not being monitored or controlled.

5. Documentation has not been duplicated and stored in a separate, secure location.

Recommendations

1. Rebag and rebox all materials into 4-mil, ziplock polyethylene plastic bags and acid-free boxes. Additionally, interior labels made from spun-bonded polyethylene paper (e.g., Nalgene polypaper) should be labeled in indelible ink and inserted into the polyethylene plastic bags.

2. Place paper records in acid-free folders, make photocopies of all paper records on acid-free paper or microfilm, and store duplicate copies in a separate, secure location.

3. Develop an integrated pest-management plan.

4. Rebox artifacts into standard-sized, acid-free boxes. Avoid overpacking of materials.

5. Develop an inventory plan that includes a regularly scheduled inventory of the collections.

6. Identify all recovered associated and unassociated funerary objects, sacred objects, and objects of cultural patrimony, as defined by NAGPRA regulations.

7. Analyze all human remains according to NAGPRA regulations

8. Keep collections storage area rooms locked while not in use.

9. Replace inadequate locks.

10. Use the HVAC system to stabilize the relative humidity and temperature.

11. Maintain filter-changing schedule for HVAC system.

12. Designate a holding room for disinfecting new collections.

13. Maintain greater control over access to the building (and particularly to the collections area), especially when bedroom facilities are occupied.

14. Deactivate or remove electrical equipment from Collection Area 1, or move collection to another room with in the facility.

15. Adopt a no food/no drink policy for the collections storage area.

16. Develop written policies and procedures that address such items as loans, laboratory processing and curation, and inventorying.

17. Label artifacts in indelible ink on a protective coating.

18. Develop an emergency management plan.

19. Create a full-time position for curator of the collections.

Reports Related to Archeological Investigations at NAWS Point Mugu

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1981 Fishhooks, Gorges, and Shell Beads: Time Markers on San Nicolas Island, California. Paper presented at the 46th Annual Meeting of the Society for American Archaeology, San Diego. Manuscript on file, Naval Air Weapons Station, Point Mugu.

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1985 *The Cultural Resources of San Nicolas Island, California.* Manuscript on file, Naval Air Weapons Station, Point Mugu.

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1960 Six Burial Sites on San Nicolas Island. *University of California, Archaeological Survey Annual Report* 2:1–134. Los Angeles.

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1960 Additional Surface Artifacts from San Nicolas Island. In Six Burial Sites on San Nicolas Island. *University of California, Archaeological Survey Annual Report* 2:85–100. Los Angeles.

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1930 Channel Island Expedition. *San Diego Museum Bulletin* No. 12 (August 1).

1930 San Nicolas Island Expedition. *San Diego Museum Bulletin* No 13 (October 1).

1931 San Nicolas Island Exhibit. *San Diego Museum Bulletin* No. 15 (February 1).

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1875 Some Remains of a Former People. *Overland Monthly* 15:374–379. San Francisco.

1875 *Continuation of Contents of Boxes Forwarded to Empire Warehouse in San Francisco.* Records Unit 305, Accession No. 4199. Manuscript on file, Smithsonian Institution Archives, Washington, D.C., and Naval Air Weapons Station, Point Mugu.

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Schwartz, Steven J.

1991 *Synopsis of Excavated Sites on San Nicolas Island.* Manuscript on file, Naval Air Weapons Station, Point Mugu.

1991 *Recent Archaeological Research on San Nicolas Island.* Paper presented at the Society for California Archaeology Data Sharing Meeting, Los Angeles. Manuscript on file, Naval Air Weapons Station, Point Mugu.

Schwartz, Steven J., and Patricia Martz

1992 An Overview of the Archaeology of San Nicolas Island, Southern California. *Pacific Coast Archaeological Society Quarterly* 28(4):46–75.

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1993 *Journals of Two Voyages to San Nicolas Island, California, April 10–28, 1940 and November 23–December 12, 1940 by Arthur Woodward.* Transcribed and Edited by Steven J. Schwartz. Manuscript on file, Naval Air Weapons Station, Point Mugu.

Strudwick, Ivan H.

1986 *Temporal and Areal Considerations Regarding the Prehistoric Circular Fishhook of Coastal California.* Unpublished Master's thesis, Department of Anthropology, California State University, Long Beach.

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Walter, Paul (editor)

1932 Grass Skirts from San Nicolas. *El Palacio* 33:168. School of American Research, Santa Fe.

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1978 *Survey of Archaeological and Biological Resources of San Nicolas Island.* Westec Services. Submitted to the Pacific Missile Test Center, Point Mugu.

Woodward, Arthur

1939 *Archaeological survey of San Nicolas Island July 22–July 28, 1939.* Unpublished field notes on file, Los Angeles County Museum of Natural History, Los Angeles, and Naval Air Weapons Station, Point Mugu.

1940 *Journals of two voyages to San Nicolas Island, California; April 10–April 28, 1940 and November 23–December 12, 1940.* Unpublished field notes on file, Los Angeles County Museum of Natural History, Los Angeles, and Naval Air Weapons Station, Point Mugu.

1940 Archaeology. In *Progress Report of the Los Angeles Museum-Channel Islands Biological Survey: Fourth Expedition; San Nicolas, San Miguel, Santa Rosa and Santa Cruz Islands. July 21 to August 19, 1939,* by Don Meadows pp. 35–36. Manuscript on file, Los Angeles County Museum of Natural History, Los Angeles, and Naval Air Weapons Station, Point Mugu.

1940 Communication to "Notes and News—Pacific Coast Area." *American Antiquity* 5:252.

1941 Communication to "Notes and News—Pacific Coast Area." *American Antiquity* 6:285.

1941 Communication to "Notes and News—Pacific Coast Area." *American Antiquity* 6:358.

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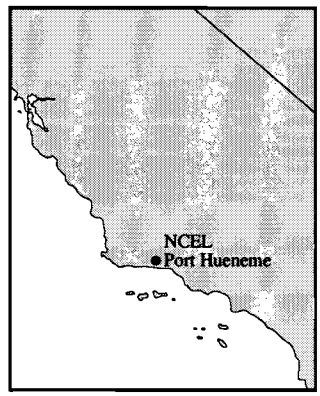
1900 Archaeology of California: Southern California. In *Prehistoric Implements: A Reference Book,* by Warren K. Moorehead, pp. 230–252. Charley G. Drake Publisher, Union City, Georgia.

9

Naval Civil Engineering Lab

Port Hueneme, California



Facility Summary

Volume of Artifact Collections: None

Linear Feet of Records: None

Human Remains: None

Status of Curation Funding: Not applicable

Status of Facility Repository: Not applicable

NAGPRA Status: Not applicable

Collection Update (October 1997): No updated information at this time.

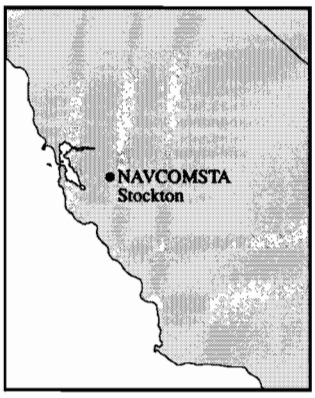
NCEL Port Hueneme is located in Ventura County across the harbor from the Naval Construction Battalion Center, Port Hueneme. Established in 1948, the lab was originally located in Solomons, Maryland. The full-spectrum laboratory moved to its current location in 1950. Pursuant to the Base Realignment and Closure Act, as amended, the Navy is in the process of disposing of this property.

In March 1994, St. Louis District personnel performed background archeological research at the South Central Coastal Information Center, UCLA, which included a review of all pertinent archeological site forms, reports, and manuscripts. As of this date, no archeological materials have ever been recovered from NCEL Port Hueneme, nor have archeological reports been generated.

10

Naval Communications Station

Stockton, California



Facility Summary

Volume of Artifact Collections: None

Linear Feet of Records: None

Human Skeletal Remains: None

Status of Curation Funding: Not applicable

Status of Facility Repository: Not applicable

NAGPRA Status: Not applicable

Collection Update (October 1997): Bibliographic references published since the date of the assessment have been added.

NAVCOMSTA Stockton is located in San Joaquin County approximately 10 miles from the city of Stockton, California, on 1,433 acres of Rough and Ready Island. In 1943, the Navy acquired Rough and Ready Island and commissioned a Naval Supply Depot. The depot developed into a major supplier for World War II. The Navy now owns all of Rough and Ready Island except for two 13-acre parcels that are owned by the Shell and Mobil Oil Corporations. The Naval Radio Transmitting Facility (NRTF), Dixon, is also under the command and operational control of NAVCOMSTA Stockton. This facility is located southwest of Sacramento in Solano County. Pursuant to special legislation (P.L. 104-160, Land Conveyance), the Navy is evaluating the potential transfer/lease of the Stockton property on Rough and Ready Island to the Port of Stockton.

In March 1994, St. Louis District personnel performed background archeological research at the Central California Archaeological Information Center, California State College, Stanislaus, in Turlock, which included a review of all pertinent archeological site forms, reports, and manuscripts.

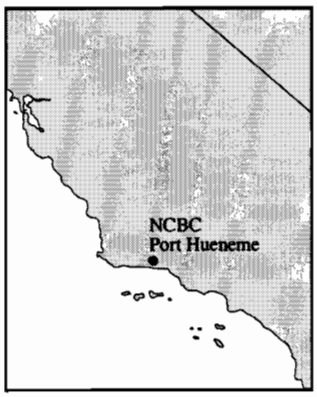
Reports Related to Archeological Investigations at NAVCOMSTA Stockton

Uribe and Associates
1996 *Historic and Archeological Protection Plan for the Naval Communication Station, Stockton, California.* Submitted to Engineering Field Activity, West, Naval Facilities Engineering Command, San Bruno, California.

11

Naval Construction Battalion Center

Port Hueneme, California



Facility Summary

Volume of Artifact Collections: None

Linear Feet of Records: < 1 linear foot
On Base: None
Off Base: < 1 linear foot (RMW, Mission Viejo, California; see Chapter 39)
Compliance Status: All associated documentation will require complete rehabilitation to comply with existing federal guidelines and standards for modern archival preservation.

Human Skeletal Remains: None

Status of Curation Funding: Curation activities are not funded.

Status of Facility Repository: This facility does not have a dedicated repository for the curation of their associated documentation.

NAGPRA Status: Based on present information, no NAGPRA Section 5 inventory is required.

Collection Update (October 1997): No updated information at this time.

NCBC Port Hueneme, a 1,600-acre installation in the communities of Oxnard and Port Hueneme, is approximately 60 miles northwest of Los Angeles in Ventura County. In 1942, the base began training, staging, and supply operations for the newly created Seabees. During World War II, the Korean War, and the Vietnam War, this facility shipped more construction supplies than any other port in the United States. The mission remains the same to this day.

In March 1994, St. Louis District personnel performed background archeological research at the South Central Coastal Information Center, UCLA, which included a review of all pertinent archeological site forms, reports, and manuscripts. As of this date, no archeological materials have been recovered from NCBC Port Hueneme; there is, however, associated archeological documentation housed at RMW Paleo Associates (see Chapter 39).

Reports Related to Archeological Investigations at NCBC Port Hueneme

Bissell, Ronald M.
1991 *Cultural Resources Reconnaissance of Five Areas on the Port Hueneme Naval Reservation, Ventura County, California.* RMW Paleo Associates, Mission Viejo, California.

1991 *Cultural Resources Reconnaissance of a Small Parcel on the Port Hueneme Naval Reservation, Ventura County, California.* RMW Paleo Associates, Mission Viejo, California.

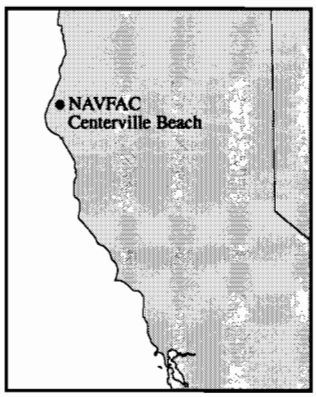
Fugro-McClelland (West), Inc.
1991 *Draft Environmental Assessment for FY 92, Military Family Housing—Project H-190, PMTC Point Mugu, and NCBC Port Hueneme, California.* Fugro-McClelland (West), Inc.,Ventura, California.

Uribe and Associates
1994 *Draft Cultural Resources Overview Naval Construction Battalion Center Port Hueneme, Ventura County, California. Contract No. N62474-92-D-3499.* Uribe and Associates. Submitted to the Western Division Naval Facilities Engineering Command, San Bruno, California.

12

Naval Facility, Centerville Beach

Ferndale, California



Facility Summary

Volume of Artifact Collections: None

Linear Feet of Records: None

Human Skeletal Remains: Not applicable

Status of Curation Funding: Not applicable

Status of Facility Repository: Not applicable

NAGPRA Status: Not applicable

Collection Update (October 1997): A bibliographic reference published since the date of the assessment has been added.

NAVFAC Centerville Beach encompasses 37 acres on a cliff overlooking the Eel River valley to the north and bordered by the Pacific Ocean on the west. It is located approximately 260 miles north of San Francisco, in Humboldt County. Forces of the U.S. Pacific Fleet were assigned here after it was commissioned in 1958 as a shore facility. Pursuant to the Base Realignment and Closure Act, as amended, the Navy has closed operations and is in the process of disposing of this property.

In March 1994, St. Louis District personnel performed background archeological research at the Northwest Archaeological Information Center, Sonoma State University, Rohnert Park, California, which included a review of all pertinent archeological site forms, reports, and manuscripts. As of this date, no archeological materials have been recovered from NAVFAC Centerville Beach.

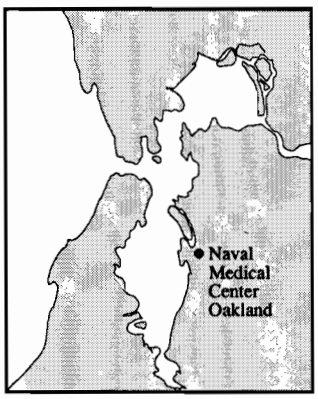
Reports Related to Archeological Investigations at NAVFAC Centerville Beach

Perry, Michael E., and Rebecca Plank
1994 *Archeological Survey Report for Naval Facility Centerville Beach and Dependent Housing Area.* Submitted to Engineering Field Activity, West, Naval Facilities Engineering Command. San Bruno, California.

13

Naval Medical Center

Oakland, California



Facility Summary

Volume of Artifact Collections: None

Linear Feet of Records: None

Human Skeletal Remains: None

Status of Curation Funding: Not applicable

Status of Facility Repository: Not applicable

NAGPRA Status: Not applicable

Collection Update (October 1997): No updated information at this time.

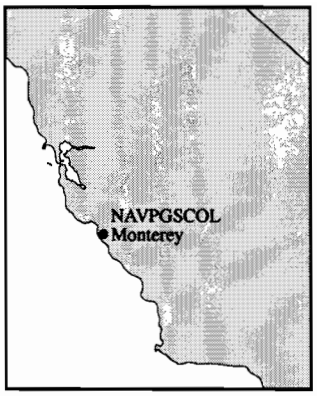
Naval Medical Center, Oakland, encompasses approximately 220 acres and is located in Alameda County in the city of Oakland, California, on the site where the Oak Knoll Golf and Country Club was formerly located. The Naval Medical Center was commissioned in 1942 to care for injured servicemen during World War II. Pursuant to the Base Realignment and Closure Act, as amended, the Navy has closed operations and is in the process of disposing of this property.

In March 1994, St. Louis District personnel performed background archeological research at the Northwest Archaeological Information Center, Sonoma State University, Rohnert Park, California, which included a review of all pertinent archeological site forms, reports, and manuscripts. As of this date, no archeological materials have ever been recovered from Naval Medical Center Oakland, nor have any reports been generated because of archeological investigations there.

14

Naval Postgraduate School

Monterey, California



Facility Summary

Volume of Artifact Collections: None

Linear Feet of Records: None

Human Skeletal Remains: None

Status of Curation Funding: Not applicable

Status of Facility Repository: Not applicable

NAGPRA Status: Not applicable

Collection Update (October 1997): No updated information at this time.

A naval postgraduate school was established in 1909 at Annapolis, Maryland. In 1951, the school officially moved to the City of Monterey in Monterey County. NAVPGSCOL Monterey is situated on 620 acres. Presently, the school offers more than 30 academic programs. Enrollment consists of over 1,700 students representing all services.

In March 1994, St. Louis District personnel performed background archeological research at the Northwest Archaeological Information Center, Sonoma State University, Rohnert Park, California, which included a review of all pertinent archeological site forms, reports, and manuscripts.

A Native American burial that was discovered and removed during construction at the school in 1989 was promptly reinterred in accordance with the direction of the California Native American Heritage Commission's designated closest living descendant.

Reports Related to Archeological Investigations at NAVPGSCOL Monterey

Chavez, David
1981 *Archaeological Resources Review for the Naval Post Graduate School, Monterey, California.* San Francisco, California.

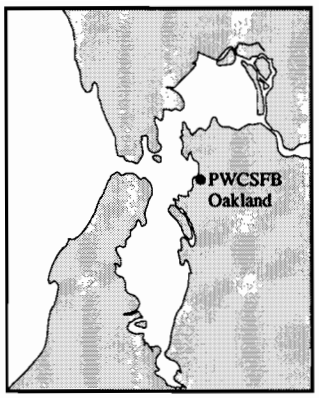
Haversat, Trudy, and Gary S. Breschini
1989 *Archaeological and Osteological Analyses of a Prehistoric Burial Recovered from the Naval Post Graduate School, Monterey, Monterey County, California.* Archaeological Consulting, Salinas, California.

Uribe and Associates
1994 *Draft Historic and Archaeological Resource Protection Plan (HARP) for Naval Post Graduate School Monterey, Monterey County, California.* Submitted to Engineering Field Activity, West, Naval Facilities Engineering Command, San Bruno, California, Contract No. N62474-92-D-3499.

15

Naval Public Works Center

San Francisco Bay, Oakland



Facility Summary

Volume of Artifact Collections: None

Linear Feet of Records: None

Human Skeletal Remains: None

Status of Curation Funding: Not applicable

Status of Facility Repository: Not applicable

NAGPRA Status: Not applicable

Collection Update (October 1997): No updated information at this time.

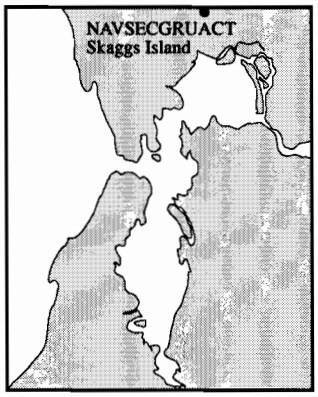
Naval PWCSFB Oakland is located in Alameda county. The facility is a tenant command on the Fleet and Industrial Supply Center, and is responsible for the housing units at naval facilities within EFA West's jurisdiction. The Navy is closing this facility and is in the process of disposing of the property.

In March 1994, St. Louis District personnel performed background archeological research at the Northwest Archaeological Information Center, Sonoma State University, Rohnert Park, California, which included a review of all pertinent archeological site forms, reports, and manuscripts. As of this date, the official state site files indicate that no archaeological materials have been recovered from Naval PWCSFB Oakland, nor have any reports been generated because of archeological investigations there.

16

Naval Security Group Activity, Skaggs Island

Sonoma, California



Facility Summary

Volume of Artifact Collections: None

Linear Feet of Records: None

Human Skeletal Remains: None

Status of Curation Funding: Not applicable

Status of Facility Repository: Not applicable

NAGPRA Status: Not applicable

Collection Update (October 1997): No updated information at this time.

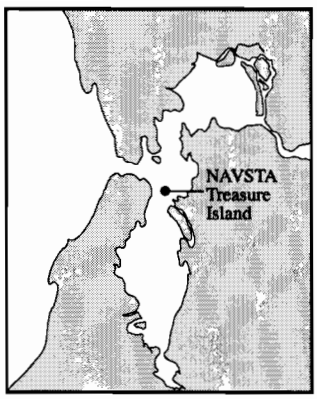
NAVSECGRUACT Skaggs Island encompasses approximately 4,300 acres on the shore of San Pablo Bay in the northern part of San Francisco Bay. It is located in Sonoma County, 8 miles west of the Mare Island Naval Shipyard. Commissioned in 1941 as Naval Radio Station, San Francisco Receivers Unit, the command was redesignated in 1962 with its current name. The mission of NAVSECGRUACT at Skaggs Island has been disestablished and the property reported to General Services Administration as excess.

In March 1994, St. Louis District personnel performed background archeological research at the Northwest Archaeological Information Center, Sonoma State University, Rohnert Park, California, which included a review of all pertinent archeological site forms, reports, and manuscripts. As of this date, no archeological materials have ever been recovered from NAVSECGRUACT, nor have any reports been generated because of archeological investigations there.

17

Naval Station Treasure Island

San Francisco, California



Facility Summary

Volume of Artifact Collections: 1 ft^3
On Base: None
Off Base: 1 ft^3 (Phoebe Hearst Museum [see Chapter 45])
Compliance Status: Collections will require rehabilitation to comply with existing federal guidelines and standards for curation.

Linear Feet of Records: > 0.5 linear feet
On Base: None
Off Base: > 0.5 linear feet (Phoebe Hearst Museum [see Chapter 45]
Compliance Status: Associated documentation will require partial rehabilitation to comply with current federal guidelines and modern archival-preservation standards.

Human Skeletal Remains: 1 ft^3
On Base: None
Off Base: 1 ft^3 (one individual) is housed at the Phoebe Hearst Museum.

Status of Curation Funding: None

Status of Facility Repository: Not applicable

NAGPRA Status: NAGPRA inventory has been conducted.

Collection Update (October 1997): Native American burials were excavated from site CA-SFR-04 when the Naval Training Station was built on Yerba Buena Island in 1899 and again when the Oakland/Bay Bridge was constructed in 1933. The remains encountered in 1933 were taken to the Phoebe Hearst Museum (formerly Lowie) at the University of California, Berkeley. Because of the Phoebe Hearst Museum's policy regarding human skeletal remains, these materials were not assessed as part of this work. Yerba Buena Island is within the City and County of San Francisco, and there are no recognized tribes associated with the island.

Bibliographic references published since the date of the assessment have been added.

NAVSTA Treasure Island is located in San Francisco County. It occupies part of Yerba Buena Island, which is a natural landform, and Treasure Island, which is a 400-acre landform built by the U.S. Army Corps of Engineers for the 1939–1940 Golden Gate International Exposition. Treasure Island was to become the location of San Francisco's airport after the fair. Artifacts relating to the International Exposition can still be found in the would-be airport's terminal, and two hangars remain little altered since 1940. The island was built on top of the Yerba

Buena shoals, a shallow sheet of rock extending north from Yerba Buena Island. Following the Golden Gate Exposition, San Francisco leased Treasure Island to the Navy. During World War II, approximately 12,000 recruits were processed here every day, many of whom were sent to the Pacific Theater. While many were shipped out immediately, some of the men were trained to operate naval vessels. Recruits were also trained here to recognize enemy aircraft. NAVSTA Treasure Island was used by the Marine Corps to house nearly all the Marines who passed through San Francisco. German prisoners of war were housed on the western shore of the Island. After World War II, the city of San Francisco then traded the island to the Navy in exchange for federal land that became the San Francisco International Airport.

In 1987, Naval vessels were once again stationed at NAVSTA Treasure Island. Most recently, the facility operated training schools, processed outbound and homecoming personnel, and provided base housing for personnel stationed in the Bay area. Pursuant to the Base Realignment and Closure Act, as amended, the Navy has closed operations and is in the process of disposing of this property.

In March 1994, St. Louis District personnel performed background archeological research at the Northwest Archaeological Information Center, Sonoma State University, Rohnert Park, California, which included a review of all pertinent archeological site forms, reports, and manuscripts.

Reports Related to Archeological Investigations at NAVSTA Treasure Island

Cartier, Robert
1985 *Archival Study of the Cultural Resources of Four Candidate Sites for Navy Family Housing in Alameda, Contra Costa, San Francisco, and Marin Counties.* Archeological Resource Management, San Jose, California. Submitted to Earth Metrics, Brisbane, California.

1985 *Addendum to the Archival Study of the Cultural Resources of Four Candidate Sites for Navy Family Housing in Alameda, Contra Costa, San Francisco, and Marin Counties.* Archeological Resource Management, San Jose, California. Submitted to Earth Metrics, Brisbane, California.

Gmoser, Glenn J.
1995 *Archaeological Survey Report, San Francisco Bay-Oakland Bay Bridge Seismic Retrofit.* Caltrans District 4, Oakland, California.

Hamusek-McGann, Blossum, Mary Maniery, and Cindy Baker
1997 *Archeological Inventory and Assessment of the Naval Station Treasure Island Disposal and Reuse Project, San Francisco County, California.* Submitted to Engineering Field Activity, West, Naval Facilities Engineering Command, San Bruno, California.

Hice, Eric, and Daniel Schierling
1995 *Historical Study of Yerba Buena Island, Treasure Island and Their Buildings.* Mare Island Naval Shipyard, BRAC Environmental Division. Submitted to Naval Station, Treasure Island.

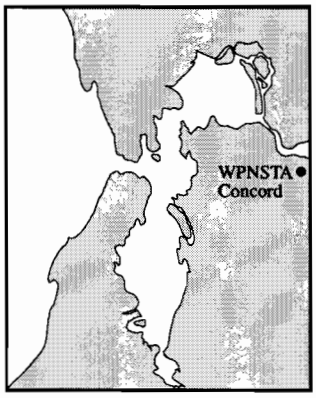
Roop, William
1984 Archaeological element of the Draft Environmental Impact Statement of the United States Navy Homeporting Study, Treasure Island, California. Archaeological Resource Service, Petaluma, California.

Wall, Louis S.
1995 Letter report to Francis P. McManamon, National Park Service, Washington, D.C., regarding status of NAGPRA inventories for Naval Shore Facilities of Engineering Field Activity (EFA), West, and Engineering Field Activity (EFA), Northwest. Manuscript on file, Engineering Field Activity, West, San Bruno, California.

18

Naval Weapons Station

Concord, California



Facility Summary

Volume of Artifact Collections: None

Linear Feet of Records: None

Human Skeletal Remains: None

Status of Curation Funding: Not applicable

Status of Facility Repository: Not applicable

NAGPRA Status: Not applicable

Collection Update (October 1997): Bibliographic references published since the date of the site-file search have been added.

In 1942, WPNSTA Concord was established as an annex to the Naval Ammunition Depot, Mare Island. WPNSTA Concord encompasses approximately 12,000 acres, and is located in north-central Contra Costa County, California. Today, it is the largest military facility on the West Coast for transshipment of ammunition and other hazardous cargo. WPNSTA Concord also provides material and technical support for ammunition, weapons, and weapons systems. It is the home port and logistic-support agency for Pacific Fleet auxiliary ammunition ships used to replenish Navy ships at sea.

WPNSTA Concord is composed of a Tidal Area and an Inland Area. The Tidal Area has a facility for sorting returned ordnance, railroad and truck classification yards, and three ocean-terminal piers capable of berthing six large cargo ships simultaneously. The Inland Area consists of administration buildings, military barracks, storage magazines, and guided-missile facilities.

In March 1994, St. Louis District personnel performed background archeological research at the Northwest Archaeological Information Center, Sonoma State University, Rohnert Park, California, which included a review of all pertinent archeological site forms, reports, and manuscripts. As of this date, there are two historical-period sites and one recorded prehistoric archaeological site on WPNSTA Concord. No archeological collections or NAGPRA-related materials have been identified as coming from this facility. Bone fragments, ground stone, lithic artifacts, shell, and modified and unmodified faunal artifacts were observed at site CA-CCO-680. Limited tests on bone fragments indicated that they were human. These fragments were reburied on-site.

Reports Related to Archeological Investigations at WPNSTA Concord

Ananian, Benjamin
1994 *Appendix B. Archaeological Reconnaissance for the Port Chicago Highway Pipeline Project. Initial Study, Port Chicago Highway Pipeline Project.* Mills Associates. Submitted to Brown and Caldwell for Contra Costa Water District.

Ananian, Benjamin, and Linda Day
1994 Archeological Site Record for CA-CCo-680. On file, Northwest Archaeological Information Center, Sonoma State University, Rohnert Park, California.

Anonymous
1980 *San Francisco Bay to Stockton, California Intensive Cultural Resources Survey and Literature Review of Four Additional Proposed Dredged Material Disposal Sites in Contra Costa and Solano Counties.*

Basin Research Associates
1995 *Cultural Resources Review, Containerization Project, Naval Weapons Station, Concord, Contra Costa County, California.* Submitted to Harding Lawson Associates for Engineering Field Activity, West, Naval Facilities Engineering Command, San Bruno, California.

1997 *Archeological Inventory Three Supplemental Areas Containerization Project, Naval Weapons Station, Concord, Contra Costa County, California.* Submitted to Harding Lawson Associates for Engineering Field Activity, West, Naval Facilities Engineering Command, San Bruno, California.

Busby, Colin I., Donna Garaventa, Stuart A Guedon, and Melody Tannam
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Carbone, Larry A., and Craig T. Woodman
1997 *Cultural Resources Survey Naval Weapons Station (NWS), Concord Port Terminal Operations and Administration Building, Contra Costa County, California.* Submitted to Engineering Field Activity, West, Naval Facilities Engineering Command, San Bruno, California.

Cartier, Robert
1985 *Archival Study of the Cultural Resources of Four Candidate Sites for Navy Family Housing in Alameda, Contra Costa, San Francisco, and Marin Counties.* Archaeological Resources Management, San Jose, California. Submitted to Earth Metrics, Burlingame, California.

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Chavez, David, and Jan M. Hupman
1990 *Cultural Resources Evaluation for the Pittsburgh-Antioch Bart Extension Project-Phase 1A and Phase 1B, Contra Costa County, California.* David Chavez and Associates. Submitted to the Bay Area Transit Consultants, Oakland, California.

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1988 *Cultural Resources Evaluation for the Pittsburgh-Antioch Alternatives Analysis, Contra Costa County, California.* David Chavez and Associates. Submitted to Bechter Civil, Inc. and Bay Area Transit Consultants, Oakland, California.

Holman, Miley Paul
1984 Letter regarding the Concord Bart Park/Ride Parking Area Archaeological Reconnaissance. Holman and Associates Archaeological Consultants, San Francisco, California. Submitted to Earth Metrics, Burlingame, California.

Jablonowski, Michael
1990 *A Class III Cultural Resources Study for the Proposed Chevron Project Corridor, Contra Costa County, California.* Sonoma State University Academic Foundation, Anthropological Studies Center, Cultural Resources Facility, California.

Self, William, Greg Mattson, Carrie Wills, Norm Dyer, and Ann Samuelson
1993 *Cultural Resources Overview Naval Weapons Station Concord, Contra Costa County, California.* William Self Associates, Orinda, California. Submitted to Engineering Field Activity, West, Naval Facilities Engineering Command, San Bruno, California.

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1989 *Historic and Archeological Survey for Potable Water Improvement Project (P-194), Concord, NWS.*

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1989 *Mt. Diablo Creek Flood Control and Stream Stabilization Plan Archaeological Survey Report, Naval Weapons Station, Concord, Contra Costa Country, California.* William Self Associates, Orinda, California. Submitted to Engineering Field Activity, West, Naval Facilities Engineering Command, San Bruno, California.

1992 *Naval Weapons Station Concord, California Final Cultural Resources Survey Report RASSs 1, 2, and 3.* William Self Associates, Orinda California. Submitted to PRC Environmental Management, San Francisco, California.

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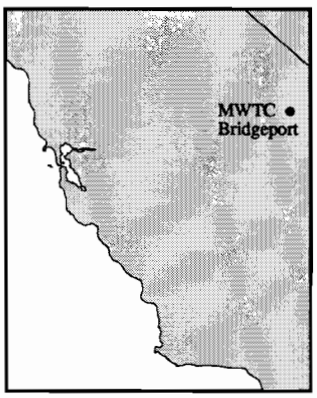
U.S. Marine Corps Mountain Warfare Training Center

Bridgeport, California



Facility Summary

Volume of Artifact Collections: 0.5 ft^3
On Base: None
Off Base: 0.5 ft^3 (Basin Research, San Leandro, California [see Chapter 32]).
Compliance Status: Collections will require partial rehabilitation to comply with existing federal guidelines and standards for curation.

Linear Feet of Records: < 1 linear foot
On Base: None
Off Base: 0.25 linear feet (Basin Research Associates [see Chapter 32]).
Compliance Status: Records will require complete rehabilitation to comply with existing federal guidelines and modern standards for archival preservation.

Human Skeletal Remains: No human remains are associated with this collection.

Status of Curation Funding: Not funded

Status of Facility Repository: Not applicable

NAGPRA Status: Based on present information, no NAGPRA Section 5 inventory is necessary.

Collection Update (October 1997): No updated information at this time.

MWTC Bridgeport encompasses approximately 46,000 acres in the Sweetwater Mountains, 21 miles north of Bridgeport, Mono County, California. Archeological research at the Northeast Archaeological Information Center, California State University, Chico, which included a review of all pertinent archeological site forms, reports, and manuscripts, and telephone conversations, revealed that all archeological materials were being housed at Basin Research Associates, San Leandro, California.

At the time the scope of work for the contract was written, MWTC Bridgeport fell under the footprint of EFA West. However, this facility was subsequently placed under the jurisdiction of the Southwest Division, Naval Facilities Engineering Command, San Diego.

Reports Related to Archeological Investigations at MWTC Bridgeport

Bard, J. C., D. M. Garaventa, R. M. Harmon, S. J. Rossa, and C. F. Praetzelis, with C. I. Busby and M. E. Tannam

1992 *Application of California Archaeological Resources Identification and Data Acquisition Program (CARIDAP) to Four Sites at the U.S. Marine Corps Mountain Warfare Training Center Bridgeport, Mono County, California.* Basin Research Associates, San Leandro, California, and Biosystems Analysis, Santa Cruz, California. Submitted to Engineering Field Activity, West, Naval Facilities Engineering Command, San Bruno, California.

1992 *CARIDAP Program Application: Sites CA-MNO-406, CA-MNO-1976, CA-MNO-2520, and CA-MNO-2561, U.S. Marine Corps Mountain Warfare Training Center, Bridgeport, Mono County, California.* Basin Research Associates, San Leandro, California.

Flynn, Katherine

1981 *Archaeological Reconnaissance for the Mountain Warfare Training Center Family Housing Project, Coleville Walker Area, Antelope Valley, Mono County, California.* Archaeological Resource Service, Novato, California. Submitted to Earth Metrics, Burlingame, California.

Jen, Carol J.

1990 *Cultural Resource Inventory of Two Proposed Navy Housing Projects in Mono County, California.* Brian F. Mooney Associates, San Diego.

Parr, Robert E.

1988 *Environmental Impact Evaluation: An Archaeological Assessment of Proposed Sonora Peak Hydroelectric Project, Mono County, California.* Archaeological Research Unit, University of California, Riverside.

Pease, Ben

1990 Memo file report: Research on Mountain Warfare Training Center/Pickel Meadows Area.

Turner, A., and T. Stearns

1980 *Cultural Reconnaissance Report: Expansion of the Marine Corps Mountain Warfare Training Center Bridgeport.* USDI Forest Service, Reno, Nevada.

William Self Associates

1988 *Archeological Survey Report Mountain Warfare Training Center, Mono County, California.* William Self Associates. Submitted to EIP Associates, San Francisco, California.

1990 *Addendum to: Archeological Survey Report Mountain Warfare Training Center, Mono County, California.* William Self Associates. Submitted to EIP Associates, San Francisco.

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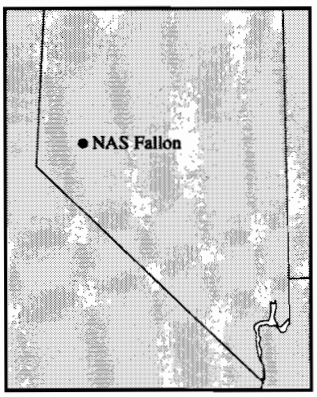
Naval Air Station

Fallon, Nevada



Facility Summary

Volume of Artifact Collections: ~5.1 ft^3
On Base: None
Off Base: 1.6 ft^3 (Phoebe Hearst Museum [see Chapter 45]), 3 ft^3 (NSM [see Chapter 38]), < 1 ft^3 (UNR [see Chapter 48]).
Compliance Status: Collections require partial rehabilitation to comply with existing federal guidelines and standards for curation.

Linear Feet of Records: 6 linear feet
On Base: 3 linear feet
Off Base: 3 linear feet (Phoebe Hearst Museum [see Chapter 45], NSM [see Chapter 38], and UNR [see Chapter 48]).
Compliance Status: Most of the records require complete rehabilitation to comply with existing federal guidelines and modern archival standards. Less than 1 linear foot requires no rehabilitation.

Human Skeletal Remains: 2 ft^3
On Base: None
Off Base: 2 ft^3 (a minimum of three individuals at NSM [see Chapter 38]).

Status of Curation Funding: Curation activities are underfunded.

Status of Installation Repository: NAS Fallon has no dedicated space for archeological artifact collections, but associated documentation is stored in an office on base.

NAGPRA Status: NAGPRA inventory has been completed.

Collection Update (October 1997): NAGPRA Section 5 Inventories have been completed. A full-time archeologist has been hired.

Date of Visit: February 25, 1994

Point of Contact: Larry Jones, director, Real Estate and Natural Resources Section

Prior to Navy ownership, the eastern side of the Sierras in west-central Nevada was the location of four Army air bases constructed in 1942. These were later offered to the Navy when the threat of Japanese invasion ended. The Navy used these air bases for training fighter pilots.

The Navy designated the facility as the Naval Auxiliary Air Station, for aircraft operating out of Naval Air Center, Alameda.

After World War II the facility was placed in caretaker status. With the beginning of the Korean War, it was redesignated as the Auxiliary Landing Field for NAS Alameda. In 1953, the field was reestablished as the Naval Auxiliary Air Station under Fleet Air Alameda. During the 1960s, the facility saw further expansion with associated Bombing and Electronic Warfare

Ranges to prepare air crews for Vietnam. In 1972, the facility was designated as NAS Fallon. The year 1984 brought expansion of Carrier Battle Groups and the establishment of the Naval Strike Warfare Center.

Today, NAS Fallon encompasses nearly 115,000 acres of land in west-central Nevada. This includes four separate pieces of land for use in pilot training. The fifth piece is the cantonment area of NAS Fallon, which is located 65 miles east of Reno, Nevada, and 5 miles south of Fallon, Nevada, in Churchill County. A recent acquisition of 10,000 acres is located in Dixie Valley. An additional 185,000 acres of land adjacent to NAS Fallon was proposed for withdrawal to the installation, but is not yet a part of NAS Fallon.

In February 1994, background archeological research at the NSM, which included a review of all pertinent archeological site forms, reports, and manuscripts, determined that archeological materials are being housed at the Phoebe Hearst Museum (see Chapter 45), NSM (see Chapter 38), and at UNR (see Chapter 48). The materials located at the Phoebe Hearst Museum were recovered from site 26CH83 by Grosscup in 1951. These ground-stone and lithic artifacts (a shell bead could not be located) were collected from this site, which is the state of California's designation for the Nevada site 26CH110. This site was later subsumed with 26CH112 under 26CH943, recorded by the Nevada Department of Transportation in 1985.

Assessment

A cultural resources management plan was recently completed for NAS Fallon. In this document it is stated that most of the cultural resources located on NAS Fallon lands consist of archeological sites. Approximately 3 linear feet of associated archeological documentation regarding NAS Fallon is located in working files in the Natural Resources director's office. Duplicates of these reports are held at EFA West in San Bruno, California, and at NSM.

Associated archeological documentation is located in the Public Works Department, Building 307, which was originally built in 1964–1965 as a barracks for NAS Fallon. It has since been converted into an office building. The entire building is 25,297 ft^2, with a concrete foundation and concrete-block exterior walls. The roof has been replaced within the last 10 years with a tar-and-gravel composite substance.

Structural Adequacy

Building 307 is structurally solid and does not show any sign of cracks or leaks. It is a three-story, aboveground, concrete-block building (Figure 12). The windows on the first and third floors are original, with steel frames, but the windows on the second floor were replaced within the last 10 years and now have aluminum frames. There is no evidence of water leakage through any of the windows. They are approximately two and one-half feet wide by three feet high and are shaded with metal blinds.

Building 307 has all the necessary utilities for running an office building. The plumbing, electricity, and heating units and vents are original to the 1965 structure, but have been upgraded and renovated continuously on an as-needed basis. No evidence of water damage was noted during inspection of the facility.

The Natural Resources director's office is located on the third floor of Building 307 is 92 ft^2 and has a carpeted concrete floor. The interior wood-studded walls are covered with painted plasterboard, and the ceiling has suspended acoustical tiles. Three windows with shades are located on the south wall. An opening in one of the widow spaces, for the air-conditioning unit, has a cardboard square duct-taped over the vent (Figure 13). On the north wall, one wood-panel interior door leads to a common hallway. Asbestos is present, though not exposed, in the east wall. The filing cabinets used for records storage are also along the east wall.

Environmental Controls

Building 307 has temperature controls for the steam-heat, boiler system, and individual window air-conditioning units. The office where the documentation is stored is kept at 60–70°F. There is no regulation or monitoring of humidity levels. Dust filters are not present on any of the

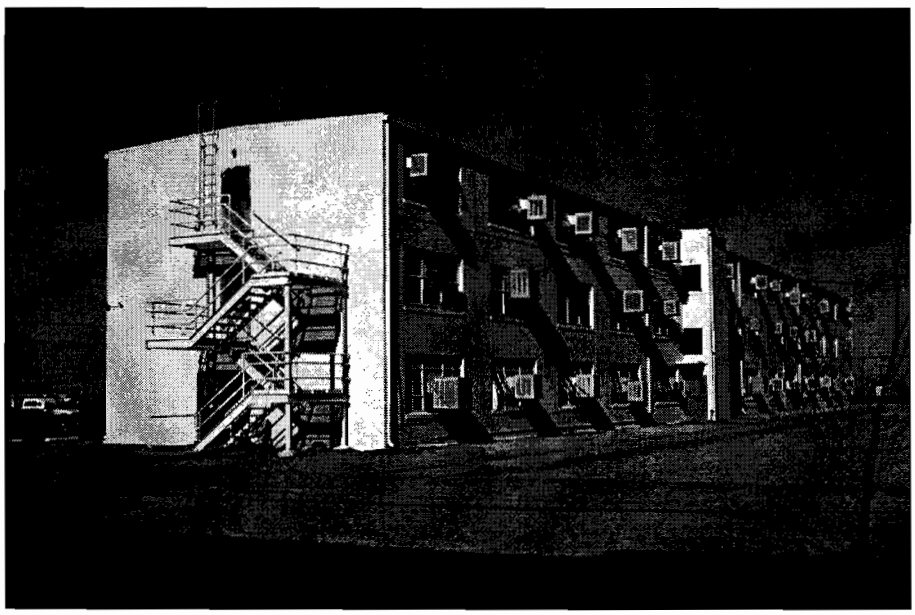


Figure 12. Exterior view of Building 307 at NAS Fallon.

Figure 13. Venetian blinds on windows retard sunlight from entering the Natural Resource director's office where cultural resource records are stored.

environmental controls. This office has fluorescent lights without ultraviolet filters. A professional janitorial company regularly maintains the building and offices. Trash is emptied daily, and offices are cleaned biweekly.

Pest Management

A professional pest-control company is contracted through the base to monitor and control any pest infestations. There has been a problem in the past with ants, and sometimes rodents, on the first floor of the building. Sticky traps are used to monitor pest infestations, and a biweekly visual inspection is performed. No signs of infestation on the third floor were noted during the site visit.

Security

Building 307 has key locks on all exterior and interior doors, and the windows all have simple latch locks. The building is secured in the evening by base security, and patrolled on a regular basis throughout the night and on weekends. There is no evidence of unauthorized access through any of the windows or doors, nor has there ever been any reported incident of unauthorized entry. The only people other than the Natural Resources director with authorized access to his office are the janitorial staff and his supervisor. His office has one interior door that is secured by a key lock.

Fire Detection and Suppression

Manual fire alarms and fire extinguishers are present throughout the facility and are inspected on a monthly basis by base fire-department personnel. There are no fire extinguishers present in the office, but there are two within easy access in the common hallway. These extinguishers were last inspected on February 2, 1994. A sprinkler system is not present in the building.

Records Storage

All on-base associated archeological documentation is stored in the working files in the Real Estate/Natural Resources director's office. These records are stored in a legal-size, metal, five-drawer filing cabinet. Drawers in the file cabinet are long lateral drawers, which are not labeled (Figure 14). The inspection team did not observe any photographic records, audio-visual records, or machine-readable records.

Paper Records

Paper records include scopes of work, administrative records, background materials, analysis records, site records and a site prediction model, comprising almost two-thirds of the total documentation. All documents are stored in acidic hanging files and acidic manila folders. The labels are printed on acidic paper inserted into plastic tabs. Records are generally in satisfactory condition, but approximately 50 percent contain contaminants such as paper clips or staples. No finding aid is available. The files are organized chronologically, as they are acquired by Jones. No archival duplicates have been produced.

Maps and Oversized Documents

Copies of topographic maps and original blueline maps are folded and stored in a lateral file drawer with the other associated documentation. Other NAS Fallon maps are rolled and placed either on end in a varnished wooden map box next to Jones's desk or on the ground next to the map box (Figure 15).

Reports

Reports mainly include drafts of cultural resources reports, cultural resources inventories, and overviews; these comprise approximately one-third of the total documentation. Reports are stored with the paper records.

Collections-Management Standards

This facility does not house any archeological collections and is not considered a permanent curation facility. Therefore, formal collections management standards have not been addressed in this report.

Figure 14. NAS Fallon records from archeological projects are stored in metal file cabinets.

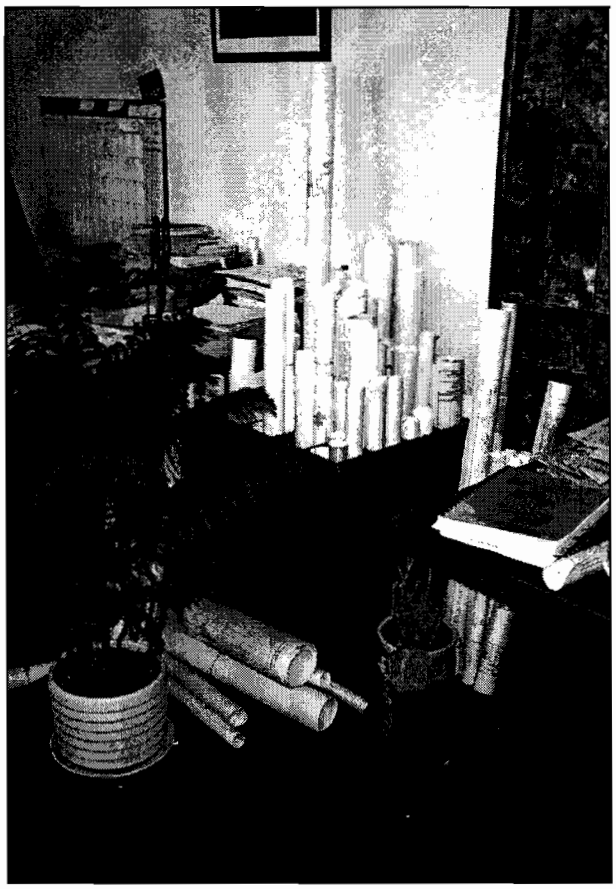


Figure 15. NAS Fallon maps from archeological projects are stored upright in a wooden storage box; some are stored on the floor.

Curation Personnel

Currently, NAS Fallon does not employ any curatorial personnel. Records maintenance and the safety of associated archeological documentation is the responsibility of the director of the Real Estate and Natural Resources Section, and the staff archeologist.

Curation Financing

NAS Fallon has a memorandum of agreement with the Fallon Paiute-Shoshone Tribe that contains a curation agreement. There is no funding for the curation of documentation associated with archeological investigations on NAS Fallon.

Access to Collections

The Natural Resources director and his staff have access to the records located in his office.

Future Plans

An archeologist has been hired since the assessment was conducted to update the cultural resource files and ensure administrative control over archeological activities on NAS Fallon.

Comments

1. Associated documentation is easily accessible.

2. Neither the building nor the records storage room have any humidity-monitoring or -control devices.

3. Asbestos is present in at least one of the interior office walls.

4. Documentation has not been photocopied onto acid-free paper.

Recommendations

1. Once cultural resource files are brought up to date, a duplicate copy of all associated documentation should be produced on acid-free paper and stored in a separate, secure, and fire-proof facility to prevent data loss. These copies should be placed in acid-free folders and labeled in indelible ink. Place all folders in acid-free boxes that have adhesive polyethylene label holders; place acid-free paper inserts, labeled with indelible ink, in the label holders.

2. Obtain past reports and other information concerning archeological projects and resulting collections from NAS Fallon.

3. Develop and maintain a protocol for ensuring administrative control over all archeological material, including artifacts, associated documentation, and original documents used in developing final reports.

4. Maintain records of collections inventories, locations, and agreements with authorized curation facilities.

5. Remove all contaminants from documents.

6. Designate additional storage space for associated records.

7. Flatten oversized material and place in flat map cases.

8. Arrange all associated documentation following modern archival procedures and create a finding aid for the documentation collection.

9. Monitor and control humidity levels in records storage areas.

10. Place ultraviolet filters on fluorescent light sources.

11. Remove all asbestos from the building.

12. Ensure that the curation of all archeological materials, including collections and associated documentation, is properly funded.

Reports Related to Archeological Investigations at NAS Fallon

Additional archeological surveys have been conducted since 1995 and are not listed here. None involved collection of artifacts.

Anonymous
1986 *Interim Study Report by the State of Nevada for the USN Supersonic Operations Area Naval Air Station, Fallon, Nevada.* Submitted to the Governor's Office of Community Services in Cooperation with the Nevada Departments of Agriculture, Minerals, and Wildlife, and the Department of Anthropology, University of Nevada–Reno.

1987 *Report of Study Finding for the Navy's Supersonic Operations Area (SOA) Naval Air Station Fallon, Nevada.*

Anton, S. C., C. I. Busby, S. J. Rossa, R. M. Harmon, and D. M. Garaventa
1992 *Analysis of Native American Skeletal Remains from 26CH1775, NAS Fallon, Churchill County, Nevada.* Basin Research Associates, San Leandro, California. Submitted to Engineering Field Activity, West, Naval Facilities Engineering Command, San Bruno, California.

Bard, J. C., C. I. Busby, and J. M. Findlay
1979 *A Cultural Resource Overview of the Carson and Humboldt Sinks, Nevada* (revised 1980). Basin Research Associates, Berkeley, California. Submitted to Engineering Field Activity, West, Naval Facilities Engineering Command, San Bruno, California.

Bennett, Reb E.
1976 *Cultural Resources Report: Temperature Gradient Holes D-19 and D-20; Amendment to Plan of Operation on Federal Lease N-12865; Al-Aquitaine Exploration, Ltd.* Bureau of Land Management, Carson City, Nevada.

1977 *Cultural Resources Report: Geothermal Resource Exploration Operation, Notice of Intent Nv-030-31 (4 Additional Holes).* Bureau of Land Management, Carson City, Nevada.

Botti, Nancy
1985 *Cultural Resources Reconnaissance for U.S. Energy Corporation Powerline Corridor: Roys Point to Dixie Valley, Churchill County, Nevada.* Archaeological Research Associates, Virginia City, Nevada. Submitted to the Bureau of Land Management, Carson City, Nevada.

Brigham, William R.
1990 *Cultural Resources Report: Hercules Big Game Guzzler (JDR 6573).* Bureau of Land Management, Carson City, Nevada.

1990 *Cultural Resources Report: Lauderback Big Game Guzzler (JDR 6575).* Bureau of Land Management, Carson City, Nevada.

Budy, Elizabeth E.
1987 *An Intensive Archaeological Survey of Tracts Site T20, Stillwater Wildlife Management Area.* Intermountain Research, Silver City, Nevada for SRS Technologies, Fallon, Nevada.

Busby, Colin I., Karen M. Nissen, John M. Findlay, James C. Bard, Robert M. Harmon, Michael R. Fong, Angela M. Banet, Sondra A Jarvis, and Melody E. Tannam
1989 *A Cultural Resources Overview and Class III Inventory of Selected Areas of "Mainside"-NAS Fallon, Churchill County, Nevada in Support of Geothermal Development EIS.* Basin Research Associates, San Leandro, California. Submitted to Harding and Lawson Associates, Novato, California. [Technical Appendix C in Programmatic EIS for Geothermal Development Naval Air Station Fallon, Vol. II (EIS Appendixes), Nevada.]

Busby, Colin I., and Larry S. Kobori
1980 *A Cultural Resource Inventory of the MX Missile System in Nevada: Phase I, 1980.* Commonwealth Associates and Basin Research Associates, San Leandro, California. Submitted to Henningson, Durham and Richardson, Sciences Division.

Busby, C. I., and R. M. Harmon
1991 *A Cultural Resources Inventory of 23+ Acres for Navy Family Housing Project at NAS Fallon, Churchill County, Nevada.* Basin Research Associates, San Leandro, California. Submitted to Fugro-McClelland (West).

Busby, C. I., S. J. Rossa, R. M. Harmon, and D. M. Garaventa
1991 *A Cultural Resources Inventory of 125+ Acres for Test Drive Area for Tracked Vehicles at NAS Fallon, Churchill County, Nevada.* Basin Research Associates, San Leandro, California. Submitted to Engineering Field Activity, West, Naval Facilities Engineering Command, San Bruno, California.

Busby, C. I., S. J. Rossa, R. M. Harmon, J. C. Bard, and D. M. Garaventa
1992 *Site Testing of 26Ch1775 at NAS Fallon, Churchill County, Nevada.* Basin Research Associates, San Leandro, California. Submitted to Engineering Field Activity, West, Naval Facilities Engineering Command, San Bruno, California.

Cranston, Renee, and Donald L. Hardesty
1988 *Archaeological Investigations in Dummy Canyon, Paiute Canyon, and Sage Hen Canyon, Churchill County, Nevada.* Prepared for the Office of Community Services, State of Nevada, Carson City.

Creger, Cliff C.
1991 An Intensive Archaeological Survey for a Laser Designator on B-17, Fallon Naval Air Station, Churchill County, Nevada. *Stillwater Wildlife Management Area Technical Report No. 2.* U.S. Fish and Wildlife Service. Submitted to Naval Air Station, Fallon, Nevada.

1991 *Stillwater Wildlife Management Area Technical Report No. 1.* U.S. Fish and Wildlife Service. Submitted to Naval Air Station, Fallon, Nevada.

Cunningham, Arnie L.
1977 *Cultural Resources Report: Historical & Archaeological: Haul Road for Material Site Located in Dixie Valley (60′ X 1298′) S-615(3); Ea 70523.* Nevada State Highway Department.

Dansie, Amy, and Barbara Sayer
1976 *Aquitaine Geothermal Lease and Prospects; Examine Well Sites for Antiquities; Identification and Collection of Cultural Resources and Recording of Same to Provide Clearance for Drilling and Exploration Crews.* Nevada Archaeological Survey, Central Division, Carson City.

Desert Research Institute, Western Studies Center
1975 *Dixie Valley Right-of-Way Archaeological Survey.* Nevada State Museum, Carson City, Contract No. 75.

Drews, Michael P.
1982 *The Archaeological Reconnaissance of Two Seismic Test Lines in Carson Sink, Churchill County, Nevada.* Intermountain Research, IMR Project #425h, Silver City, Nevada. Submitted to the Bureau of Land Management, Carson City, Nevada.

1985 *An Intensive Archaeological Survey of 17 Electronic Warfare Threat Simulator Sites, Off-Road Access, and Transmission Line Corridor.* Intermountain Research, Silver City, Nevada, for the Bureau of Land Management, Nevada.

Duff, Patricia J.
1993 *An Intensive Archeological Survey of Four Project Areas at the Main Station, the Electronic Warfare Training Range Centroid, and the B-17 Training Range. Naval Air Station, Fallon, Nevada, Churchill County, Nevada.* Western Division, Naval Facility Engineering Command, San Bruno, California. Submitted to Naval Air Station, Fallon, Nevada.

1994 *An Intensive Archeological Survey of the B-19 Scrap Yard Access Road and the B-17 Chemical Facility Target. Western Division, Naval Facility Engineering Command, San Bruno, California.* Submitted to Naval Air Station, Fallon, Nevada.

1994 *An Intensive Archeological Survey of the B-20 Submarine Target, B-19 Holding Area for Excess Target Material and B-17 Holding Area for Excess Target Materials. Naval Air Station, Fallon, Nevada, Churchill County, Nevada.* Western Division, Naval Facility Engineering Command, San Bruno, California. Submitted to Naval Air Station, Fallon, Nevada.

1994 *An Intensive Archeological Survey of the Main Station Proposed Service Station, Commissary Footpath, and Recreation Field, and the B-17 Training Range Remote Tank Target Area.* Naval Air Station, Fallon, Nevada.

Dunbar, Helene R.
1976 *Archaeological Survey: Bench Creek Fence Enclosure.* Bureau of Land Management, Carson City, Nevada.

Elston, Robert G., Christopher Raven, and Alice M. Baldrica
1992 *Prehistoric Wetland Adaptations in the Carson Desert and the Humboldt Sink. An Element of the Nevada Historic Preservation Plan.* National Park Service. Submitted to the Department of Conservation and Natural Resources.

Hardesty, D. L.
1987 *Final Report on the Research Design for Assessing Sonic Boom Damage to Cultural Resources Below the Supersonic Operations Area, Naval Air Station, Fallon, Nevada.* University of Nevada, Reno. Submitted to the Office of Community Services, Carson City.

1990 *Proposed Cultural Resources Management Plan for the Fallon Air Station Supersonic Operation Area.* Submitted to the Office of Community Services, State of Nevada.

Hatoff, Brian W.
1976 *Cultural Resources Report Field Worksheet: Geothermal Resource Exploration Operations, No. Nv-030-31.* Bureau of Land Management, Carson City, Nevada.

1977 *Cultural Resources Report: Geothermal Temp. Gradient Test Holes: Carson Sink. Notice of Intent Nv-030-29.* Bureau of Land Management, Carson City, Nevada.

1977 *Cultural Resources Report: Phillips Petroleum Temp. Gradient Holes, Dixie Valley.* Bureau of Land Management, Carson City, Nevada.

1978 *Cultural Resources Report: Lizard Study Plot Fence-Dixie Valley.* Bureau of Land Management, Carson City, Nevada.

1978 *Cultural Resources Report: South Land Royalty Test Hole: Dixie Valley, N3-01-79.* Bureau of Land Management, Carson City, Nevada.

1979 *Cultural Resources Report: Amax Geothermal Test Holes N3-03-79.* Bureau of Land Management, Carson City, Nevada.

1979 *Cultural Resources Report: Bench Creek Commercial Woodcutting Area.* Bureau of Land Management, Carson City, Nevada.

1979 *Cultural Resources Report: Labeau-Navy Fence.* Bureau of Land Management, Carson City, Nevada.

1979 *Cultural Resources Report: Southland Royalty Test Hole (Sr-5) N3-02-79.* Bureau of Land Management, Carson City, Nevada.

1980 *Cultural Resources Report: Horse Creek Ranch Dle.* Bureau of Land Management, Carson City, Nevada.

1980 *Cultural Resources Report: Lone Rock B-20 Class III Survey.* Bureau of Land Management, Carson City, Nevada.

1982 *Cultural Resources Report: Fallon Naval Sir Station Free Use Permit (Gravel Pit).* Bureau of Land Management, Carson City, Nevada.

1983 *Cultural Resources Report: Frenchman Flat Electronic Warfare No-Drop Bombing Site.* Bureau of Land Management, Carson City, Nevada.

1985 *Cultural Resources Report Format/Field Worksheet: Dixie Valley Allotment Boundary Fence.* Bureau of Land Management, Carson City, Nevada.

1985 *Cultural Resources Report: Jdr 6358 Frenchman Pasture Fence.* Bureau of Land Management, Carson City, Nevada.

1987 *Cultural Resources Report: Jdr 6453 Chalk Mountain Pipeline Extension.* Bureau of Land Management, Carson City, Nevada.

Hatoff, Brian W., and Chuck Pope

1982 *Cultural Resources Report: Electronics Warfare Communications Site and Powerline, Frenchman, Churchill County, Nevada.* Bureau of Land Management, Carson City, Nevada.

Hause, L.

1990 *Class III Cultural Resources Inventory of Proposed Range Debris Holding Areas on Ranges B-16, B-17, B-19, and B-20, Churchill County, Nevada.* Archaeological Research Services, Virginia City, Nevada. Submitted to Naval Air Station, Fallon, Nevada.

Intermountain Research

1988 *Archeological Survey of Four Proposed Electronic Warfare Range Installations and Ancillary Linear Corridors. Confidential Technical Appendix A in Environmental Assessment for Proposed Range Air Surveillance System, Height Finder Radar System, and Communication Relay Station, Naval Air Station, Fallon, Nevada.* Submitted to Engineering Field Activity,West, Naval Facilities Engineering Command, San Bruno, California.

1991 Archeological Survey of Two Proposed Road Realignments and a Proposed Gravel Pit, and Evaluation of a Previously Recorded Site. *Bureau of Land Management CR Report No. 6-1386(P).* Submitted to Woodward-Clyde Consultants, for Naval Air Station, Fallon, Nevada.

1992 *The Archeological Reconnaissance of Proposed Fencelines at Bravo 16 and Bravo 19 Naval Air Station Fallon, Churchill County, Nevada.* Submitted to Woodward-Clyde Consultants, Oakland, California.

1992 *The Archeological Survey of Rass 2 and Rass 3 Auxiliary Facilities Near Gabbs and Austin, Nye and Lander Counties.* Submitted to Sea, Inc., Engineers.

Intermountain Research (S. Stornetta)

1991 *Archeological Survey of Child Care Facility Expansion, Navy Lodge, and Commissary/Exchange at Naval Air Station Fallon.* Intermountain Research, Silver City, Nevada.

Johnson, David S.

1982 *Fallon Naval Air Station Cultural Resources Overview.* Archaeological Services, Nevada State Museum, Carson City, Nevada, Project 1-89. Submitted to the Bureau of Land Management, Carson City, Nevada, Contract 1176.

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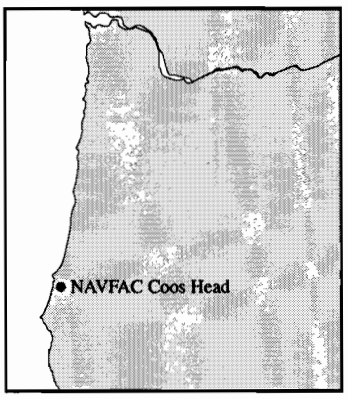
21

Naval Facility

Coos Head, Oregon



Facility Summary

Volume of Artifact Collections: None

Linear Feet of Records: None

Human Skeletal Remains: None

Status of Curation Funding: Not applicable

Status of Facility Repository: Not applicable

NAGPRA Status: Not applicable

Collections Update (October 1997): No updated information at this time

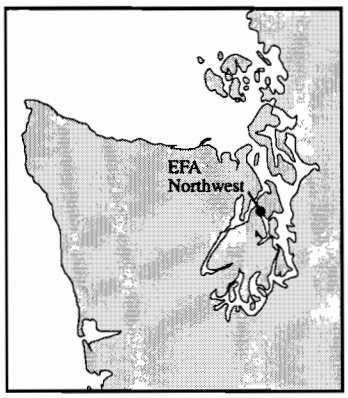
NAVFAC Coos Head, located in Coos County near Charleston, Oregon, is a remotely located 2.5-acre facility that was established in 1958. NAVFAC Coos Head was a naval detachment of NAS Whidbey Island, Washington. The facility was disestablished in 1987 as an operational command and turned over to the Oregon Air National Guard.

In April 1994, St. Louis District personnel performed background archeological research at the State Historic Preservation Office, Parks and Recreation Division in Salem, Oregon, which included a review of all pertinent archeological site forms, reports, and manuscripts. As of this date, no archeological materials have been recovered from NAVFAC Coos Head.

22

Engineering Field Activity, Northwest

Poulsbo, Washington



Facility Summary

Volume of Artifact Collections: None

Linear Feet of Records: ~16 linear feet (EFA Northwest)

Compliance Status: All associated archeological records will require complete archival rehabilitation to comply with existing federal regulations and guidelines for modern archival storage.

Human Skeletal Remains: None

Status of Curation Funding: Curation activities are not financed.

Status of Facility Repository: Not applicable

NAGPRA Status: Not applicable

Collection Update (October 1997): Carol Slade, a Community Planner at EFA Northwest, has been assigned the cultural resource responsibilities for those facilities that are within the EFA Northwest footprint.

Dates of Visits: April 11, June 2, and September 29, 1994

Points of Contact: Joe DiVittorio, Don Morris, and Peter Havens, environmental planners

EFA Northwest is a Naval Facilities Engineering Command Center in Poulsbo, Kitsap County, Washington. The facility is responsible for the planning and management of various naval activities and installations in the Pacific Northwest, including Washington, Oregon, Idaho, Montana, and Alaska. Responsibilities for cultural resource management are divided among three individuals; this division is by state and activities within each state. Peter Havens has been responsible for activities in Idaho, Montana, and the Washington activities NAS Whidbey Island and Bremerton (including Carr Inlet, Jackson Park, NSC). Don Morris has been responsible for the Washington activities of Naval Station, Puget Sound (including Everett and Everett/off-site, Pacific Beach, and Sand Point), NRS Jim Creek, NUWC Keyport, and WPNSUPFACSBDET Port Hadlock. Joe DiVittorio is responsible for the Alaskan activities of Amchitka, Adak (including the Naval Air Station and the Naval Facility), Back Island, Ketchikan, a recently closed facility in Barrow, Alaska; a small facility in Tin City, Alaska; and the Washington activities of the Naval Hospital, Bremerton, NSC Manchester, and Boardman Bombing Range, Oregon.

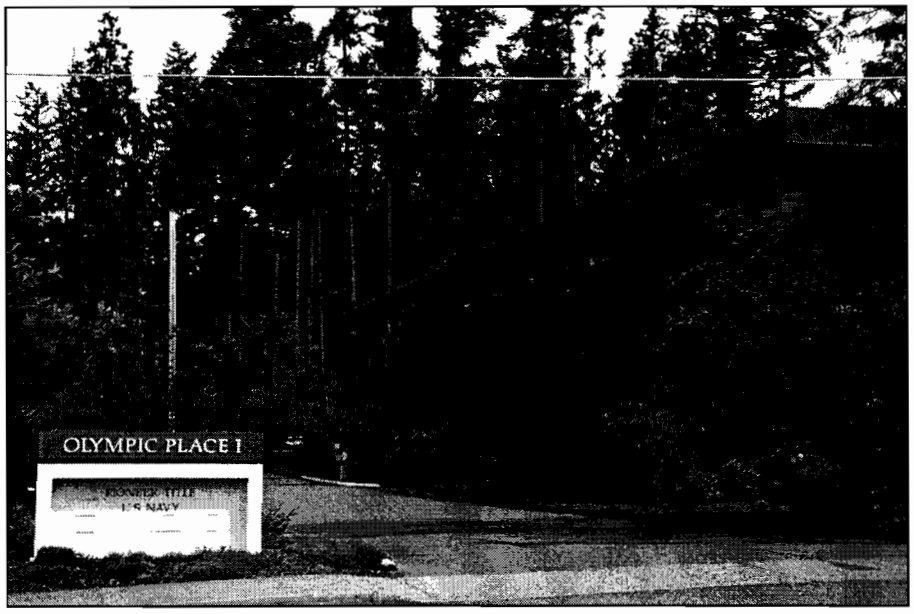


Figure 16. Exterior view of the building that houses the EFA Northwest offices.

Assessment

The offices of EFA Northwest are located on the second floor of a building known as Olympic Place (Figure 16). The 32,323-ft^2 building is shared with Alliant Techsystems, a private company that maintains and manages the building. In addition to the offices in this building, there is also an electronic assembly shop, a receiving and loading dock, a basement hazardous-materials storage area, and mechanical/utility rooms.

Structural Adequacy

Olympic Place was built approximately 10 years ago. It has a concrete foundation. Exterior walls are wood and concrete. The roof is a built-up flat "membrane," which has been repaired within the last three to four years because of water damage. The building is structurally solid and shows no signs of cracks in the foundation or exterior walls. Areas of past water leakage through the roof have been repaired. There are two floors above ground and one floor below ground. EFA Northwest is located on the second floor. There have been no structural or external changes to this building. Internal changes occur on a regular basis due to the repositioning of office space with movable interior walls. There are numerous windows in the office building; these have aluminum window frames and show no evidence of water leaks. The windows all have blinds and have never been replaced. A few windows (not necessarily in the EFA Northwest offices) have had some seal problems, but these have been repaired. Utility systems present in this office building include electricity, running water, an electric forced-heat, forced-air system with rooftop zone-control boxes, and telephone/computer lines. The utility systems are all original to the building, but have been periodically repaired and renovated.

The office space used by EFA Northwest encompasses approximately 5,780 ft^2. The combination floors are three-quarter-inch plywood and lightweight concrete covered with nylon carpet. Interior walls are painted plasterboard. Offices are divided by movable, three-fourths-covered, wood partitions. The ceiling is built of suspended acoustical tiles, with fluorescent light fixtures and sprinkler heads. There are windows, with blinds, along the exterior walls.

Environmental Controls

Olympic Place has computerized temperature sensors that monitor and regulate the forced-air, zoned-heating, and air-conditioning units. The targeted temperature range is 69–71°F. Humidity

levels are not monitored or controlled. Dust filters are present in the air vents. A functional and operating HVAC system is installed, which is regulated by rooftop control boxes. Asbestos and dust are not present. The office building is regularly maintained by the Alliant Techsystems company, located in the same office complex. Environmental conditions are the same throughout the building, including the EFA Northwest offices, where associated records are stored.

Pest Management

An integrated pest-management system is not in place in the building. Pest-infestation problems are controlled on an as-needed basis. When a problem is noticed, an industrial-strength spray is used. No signs of pest infestation were observed during the site visit.

Security

Olympic Place has an intrusion alarm that is wired directly to a private security company. Additional security measures include motion detectors throughout the interior of the building, key locks, and dead-bolt locks on all exterior doors. All interior doors are solid wood. The only windows capable of being opened are those on the second floor. These windows have standard latch locks. No additional security measures are present for the EFA Northwest offices. There was no evidence of unauthorized entry during the site visit, but there was a past episode of forced entry through one of the first floor windows. The intruder triggered a motion detector, which was followed by police response.

Fire Detection and Suppression

Fire-detection and -suppression systems in the building include a functional dry-pipe sprinkler system, fire walls, fire doors, fire extinguishers, and manual fire alarms wired into the fire department, located approximately one-and-one-half miles away. The heads for the sprinkler system have failed in the past, resulting in minor water leaks. No damage was reported to have occurred to documentation. The closest fire extinguisher to the associated documentation is an AB class dry-chemical extinguisher. It is located in the EFA Northwest offices, near the door leading to the hallway, and was last inspected in September 1993. The facility is not fireproof, but exceeded the fire codes mandated for buildings of its type when it was built 10 years ago.

Records Storage

Records are stored within the office spaces of several employees at EFA Northwest. Associated archeological documentation has never been inventoried. It is accessible to anyone with a legitimate request to see the documentation and is stored in working files kept in filing cabinets (Figure 17). Documentation is filed by project and is controlled by the managers of each project.

Currently, storage space within the offices is limited, but EFA Northwest will be moving to a new building in 1995 and will have sufficient storage space for documentation. No specific person is responsible for records safety and maintenance.

Curation procedures are not used in maintaining the associated records. Curation activities are not financed, and this office does not have a comprehensive plan for curation of records. Some documentation may have been lost because of a combination of unreturned loans and frequent office moves. Duplicate copies of some of the records can be found at the Washington State Historic Preservation Office, Olympia, and the EFA West Command offices, San Bruno, California. Recent material is also duplicated onto computer discs. Contract reports, including negative-finding reports, are stored with the project files, and are maintained by project managers. All the files have been kept up to date. The assessment team did not inspect any photographic records, maps and oversized records, audiovisual records, or machine-readable records.

Havens's working files are located in a letter-size, four-drawer metal file cabinet. Older project files are stored in a five-drawer lateral file cabinet (42 x 18 x 64 inches). An identical lateral file cabinet contains most of his reports. Both file cabinets are in a central location in the EFA Northwest offices. Some of the reports are stored in a metal shelving unit by Havens's desk (Figure 18).

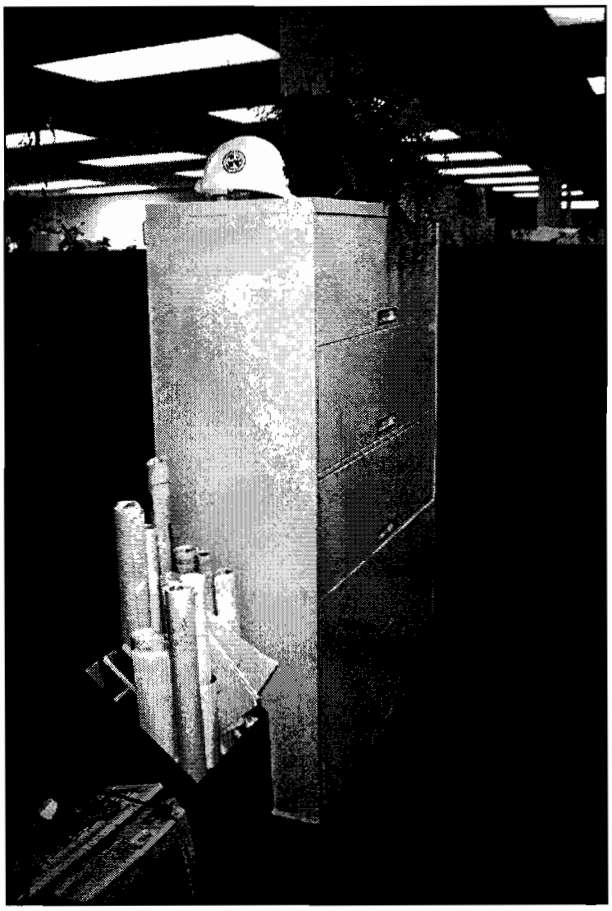


Figure 17. A lateral vertical file cabinet is used for the storage of associated records at EFA Northwest.

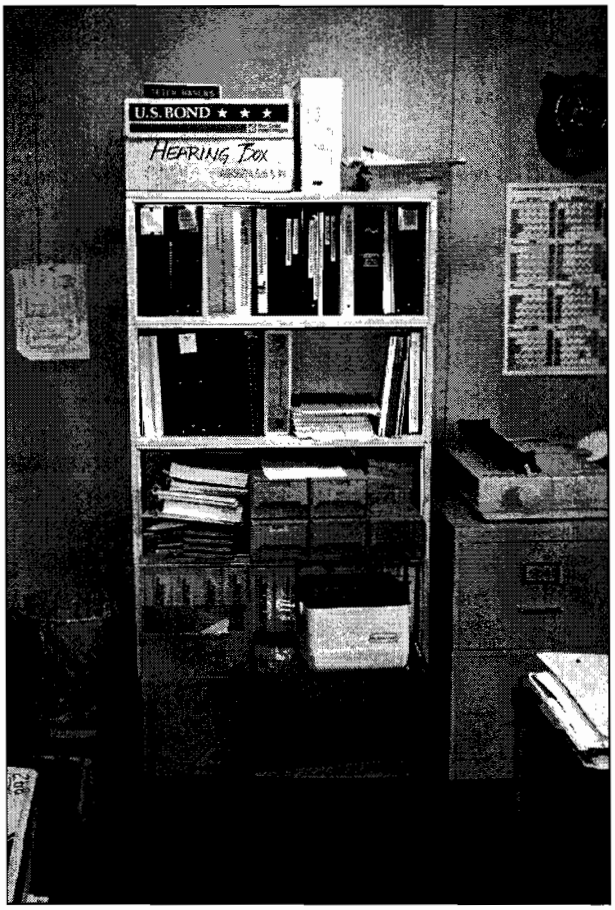


Figure 18. A metal shelving unit is used for storage of associated records at EFA Northwest.

DiVittorio's project files and reports are also located in the two lateral filing cabinets. An open metal shelving unit in his office contains additional reports. Reports have also been placed in acidic boxes that are stored on the floor.

Morris's small collection of records is stored loose on an open metal shelf. Nonarchival copies of one report are stored in an acidic, standard-sized box on the floor.

Paper Records

Paper records include project files that contain administrative files such as scopes of work, proposals, contracts, schedules, draft reports, and correspondence. No duplicates have been produced. Contaminants are present. Nonarchival acidic file folders, both legal and letter sized, are used. Labels on the file folders include direct labeling with pen or marker, acidic adhesive labels that have been typed or written on in pen or marker, and plastic tabs with acidic-paper inserts that have been typed or written on with pens or markers. Records are organized by state, naval activity within each state, and specific project. These are filed in chronological order. No finding aids have been created.

Reports

Most reports were not duplicated. All reports are on acidic paper, bound with nonarchival materials. Some contaminants are present. Reports are stored on metal shelves, in acidic boxes on the floor, and in lateral filing cabinets. The only reports concerning archeological work are a direct result of contracts issued by this office. No other archeological reports from the activities

or bases under the jurisdiction of the cultural resource specialists have been accumulated. Reports include environmental assessments, environmental impact statements, archeological resource protection plans, cultural resource surveys, master plans, and archeological survey reports. Original documentation from projects remains with the contractors who conducted the work.

Collections-Management Standards

EFA Northwest has never been designated an official repository; therefore, formal collections-management standards for this facility will not be addressed.

Curation Personnel

There are no designated curatorial personnel. Project managers are responsible for the records associated with their project areas.

Curation Financing

Curation activities are not financed.

Access to Collections

Access to associated archeological documentation is provided by the individual project manager. All of the personnel in the office have access to the records.

Future Plans

EFA Northwest has no future plans to archive their associated archeological documentation. Plans are in place for moving the entire office into a larger facility, which will provide more storage space.

Comments

1. Humidity levels in the offices are not monitored or controlled.

2. The office building has an adequate security system, but there are no additional security measures in place to protect the associated documentation.

3. A systematic filing system is not present.

4. There are is duplication of documentation. However, there is more than one copy of some reports. Copies are stored with originals.

5. Storage space is inadequate for housing the amount of associated documentation located at this facility.

6. Documentation is located in several different office areas.

Recommendations

1. Install and maintain a system to monitor and control humidity levels in the records storage area.

2. Develop proper security measures to protect associated documentation.

3. Implement a systematic cultural resource management policy.

4. Utilize a computerized database system to manage the associated documentation.

5. Archive documentation in a single location, arrange according to modern archival procedures, and create a finding aid for the collection.

6. Remove all contaminants (e.g., staples, paper clips, and rubber bands) from original documents.

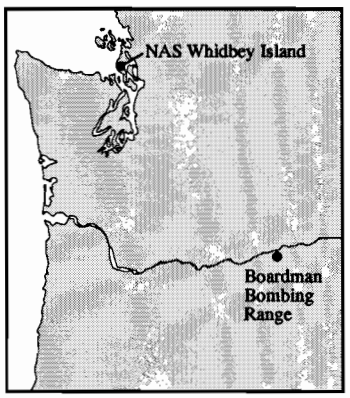
7. Duplicate all associated paper records onto acid-free paper, and place them in acid-free folders labeled in indelible ink. Place all folders in acid-free cardboard boxes and apply adhesive polyethylene plastic label holders, with acid-free paper inserts, to the boxes.

8. Store duplicates in a separate, secure, and fire-proof location.

23

Naval Air Station

Whidbey Island, Washington



Facility Summary

Volume of Artifact Collections: 77 ft^3
On Base: None
Off Base: 62 ft^3 (SCCC [see Chapter 42]), ~15 ft^3 (Burke Museum [see Chapter 49])
Compliance Status: The materials currently curated at SCCC (62 ft^3) will require complete rehabilitation. The remainder, curated at the Burke Museum (~15 ft^3), requires only partial rehabilitation.

Linear Feet of Records: 3.8 linear feet
On Base: < 1 linear foot (10 linear inches)
Off Base: 3 linear feet (SCCC [see Chapter 42]; Burke Museum [see Chapter 49])
Compliance Status: Records require complete rehabilitation.

Human Skeletal Remains: 13 ft^3 (SCCC [see Chapter 42])
On Base: None
Off Base: 13 ft^3
Compliance Status: Human remains will require complete rehabilitation.

Status of Curation Funding: Curation has been underfunded.

Status of Facility Repository: No repository has been dedicated to the curation of these collections.

NAGPRA Status: Section 5 NAGPRA inventory has been conducted.

Collection Update (October 1997): Collections from SCCC were moved to the office of Dr. Astrida Onat's company, BOAS, Inc. where they await repatriation. Consultation with the Swinomish and Samish is in progress (Steve Pennix, NAS Whidbey, personal communication 1997).

Date of Visit: May 24, 1994

Point of Contact: Steve Rothboeck, environmental planner

NAS Whidbey Island, also known as Ault Field and as the Seaplane Base, is located on Whidbey Island, the largest island in the continental United States. The island is situated in the middle of the Puget Sound, about 80 miles northwest of Seattle. The town nearest NAS Whidbey Island is Oak Harbor. Ault Field encompasses 4,362 acres, and is located 5 miles from the 2,793-acre Seaplane Base, which sits on the island's eastern shore, at the edge of Oak Harbor.

The base was established in 1942. The following year, Ault Field was named in honor of Commander William B. Ault, who was listed as missing in the Battle of the Coral Sea. The base was built for seaplane patrol operations, as a training location for recruits and petty officers, and for training in firing rockets and torpedo

Figure 19. Exterior view of Building 119 on NAS Whidbey Island.

overhaul. After World War II, the base saw a reduction in its operating status.

Today, the base is the home of all Navy electronic warfare squadrons flying the EA-6B Prowler, a carrier-based tactical jamming aircraft. It is the West Coast training and operations center for A-6 Intruder attack bomber squadrons as well as the Northwest Center for Navy and Marine Corps Air Reserve Training activities.

Several activities fall under the jurisdiction of NAS Whidbey Island, including Outlying Field, Coupeville, Washington; Boardman Bombing Range, Boardman, Oregon; Radar Bomb Scoring Unit, Spokane, Washington; and NAVFAC Coos Head, Oregon, which was turned over to the Air National Guard in 1987.

In April 1994, St. Louis District personnel performed background archeological research at the State Historic Preservation Office, Olympia, Washington, which included a review of all pertinent site forms, reports, and manuscripts. Information gathered during this research indicated that records and artifact collections for NAS Whidbey Island are housed in offices on base at Ault Field, SCCC, the Thomas Burke Museum, and at the County Coroner's Office.

An additional repository evaluation and survey questionnaire were performed at Skagit County Historical Museum (see Chapter 43), a possible repository for collections currently stored at SCCC (see Chapter 42).

Collections from Boardman Bombing Range have also been addressed in this chapter. The Bombing Range, located in north-central Oregon, is under the jurisdiction of NAS Whidbey Island. Record collections from Boardman Bombing Range were sent to NAS Whidbey Island from Geo-Marine, a contractor based in Plano, Texas.

Assessment

Archeological documentation from projects conducted on Ault Field is located in files within Building 119 (Figure 19). No artifact collections or human remains are stored at this facility. This building was originally constructed in 1942, as a cafeteria. It was renovated in 1962, and became the Navy Exchange Building. The most recent renovations and interior remodeling took place in 1989, when most of the building was converted to office space. In addition to offices, there is a records storage and study room, a kitchen area, a small utility/mechanical room, rest rooms, and a boiler room. The total area of the building is approximately 13,600 ft^2.

Structural Adequacy

Building 119 is a one-story, aboveground structure with a combination foundation (see Figure 19). Half of the building rests on piers and posts; the other half is composed of poured concrete with posts. The exterior walls have wood studs and asbestos panels. The roof, made of asphalt and tar shingles, is original to the structure. Repairs have been made on an as-needed basis. The office building is structurally solid, with no signs of cracks in the foundation or leaks in the roof.

The plastic-framed windows were installed in 1992. Windows with venetian blinds are located on all sides of the building. The windows measure approximately 2 x 3 feet (w x h). There is no evidence that the frames leak either water or air. No evidence indicated water damage to the building or to any of the associated records.

The records storage room, located within Building 119, is approximately 360 ft^2. The electrical wiring and the heating system were replaced in 1993. There is no plumbing in the half of the building where the records storage room is located. The concrete floor is carpeted, and the interior walls are composed of plasterboard over wooden posts. The ceiling has suspended acoustical tiles. There are no windows in the records storage room, but there are six wood-panel interior doors.

Environmental Controls

Building 119 has steam and hot-water heat. The vents for the heat are located in the ceiling and do not have dust filters. There are no air-conditioning or humidity monitoring and controlling devices. The plumbing is original to the 1942 construction and has been repaired on an as-needed basis. The light fixtures contain unfiltered fluorescent tubes. Maintenance is provided by a private contractor. A separate nonprofit company is employed for all janitorial services. The building is cleaned weekly.

Pest Management

There is no integrated pest-management system in place at this facility. The company responsible for the maintenance of Building 119 employs a subcontractor for pest control. Precautions are taken against insects and rodents on an as-needed basis.

Security

NAS Whidbey Island is secured at all entrance points by 24-hour guards. The inspection team had to obtain a security pass to gain entrance to the base. Security measures for Building 119 include key locks for all exterior doors and latch locks on all windows. There are no additional security measures in the records storage room. Personnel who work in Building 119 have keys to the building. The building is completely locked after business hours and on weekends. Base police patrol the area throughout the night and on weekends. Although all windows are accessible from the ground, there is no sign, nor have there been any past episodes of unauthorized entry.

Fire Detection and Suppression

Manual fire alarms are located both inside and outside the building (Figure 20). These fire alarms are wired directly to the base fire department. Fire extinguishers, last checked in April 1994, are located throughout the entire office building. Fire-safety measures in the records storage room consist of one halon tank near the interior door, on the north wall, and a fire bell suspended from the ceiling, on the south wall.

Records Storage

Archeological records are stored in one large interior room within Building 119. Several offices and work stations are present in this room. Along the west interior wall, there are eight letter-size, five-drawer metal filing cabinets. All associated archeological documentation is stored in two drawers of one of the filing cabinets, in the natural resources/cultural/archeological section.

Approximately 8–10 linear inches of file-drawer space are devoted to the storage of associated archeological documentation. This space is considered adequate for the documentation.

Figure 20. A manual fire alarm is located near an exterior door of Building 119.

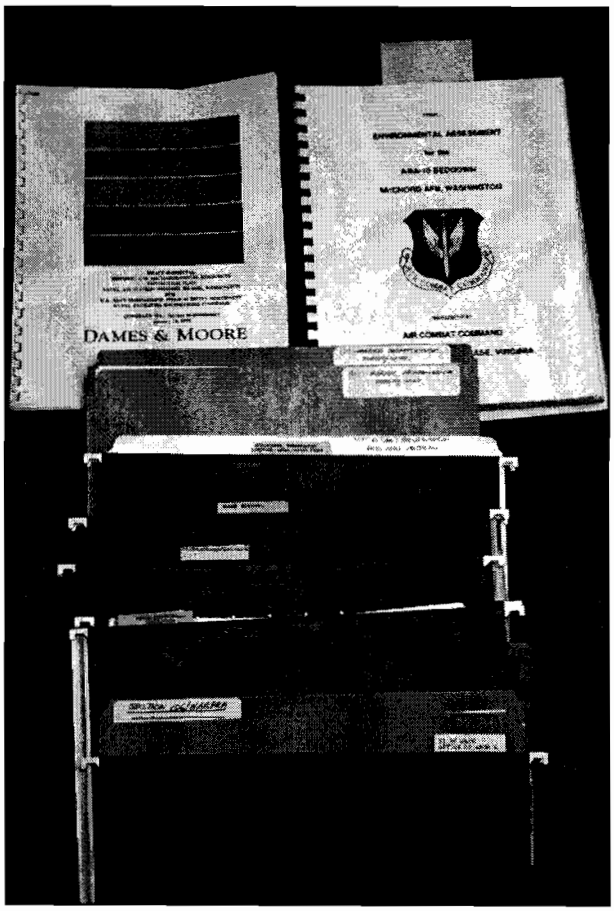


Figure 21. Associated records for NAS Whidbey Island.

The inspection team did not observe any photographic records, maps and oversized documentation, audiovisual records, or machine-readable records.

Paper Records

Paper records include administrative records, correspondence, background information on legislation, copies of site forms, draft statements of work, newspaper articles, regulations, copies of notes referring to Boardman Bombing Range, draft scopes of work, and a coroner's report (Figure 21). No duplicates of associated documentation have been made. Records are stored in acidic file folders. Labels on the folders consist of plastic tabs containing acidic-paper inserts that have been written on in ink. Contaminants are present (e.g., paper clips and staples). There is no finding aid for the documentation collection.

Reports

Reports are stored with the other paper records, in acidic file folders in the filing cabinet (see Figure 21). Reports present include an environmental assessment of the Boardman Bombing Range, and several reports for NAS Whidbey Island. Reports are bound with nonarchival materials. Copies of the reports are on file at EFA Northwest. A letter report regarding the discovery of human remains on NAS Whidbey Island is also included in the records collection.

Collections-Management Standards

No specific collections-management standards exist for the associated documentation stored in Building 119. This facility has not been designated as a permanent archeological curation facility. Therefore, formal collections-management standards have not been included in this report.

Curation Personnel

There is no full-time staff member responsible for the curation of associated archeological documentation. Steve Rothboeck, an environmental planner, is responsible for record maintenance and security.

Curation Financing

Curation activities are not financed.

Access to Collections

All personnel working in the building have access to the records. Approximately 10 people work in the Environmental Office, but only Steve Rothboeck and Matt Klope actually use the files.

Future Plans

There are no future plans to implement curation activities or practices.

Comments

1. Curation of the associated documentation have not been authorized or funded.

2. Dr. Astrida Blukis Onat (SCCC) was given permission to conduct excavations on Navy lands and still retains control over the resulting collections.

3. Associated documentation is presently being stored in an environment that does not meet federal guidelines and standards for the curation of associated archeological records.

4. This facility does not have adequate environmental controls.

Recommendations

1. Establish contractual agreements with institutions and individuals who possess collections from NAS Whidbey Island.

2. Create and maintain complete accession records.

3. Remove all contaminants from documentation.

4. Produce a duplicate copy of all associated documentation and store copies in a separate, fireproof, and secure location.

5. Arrange documentation according to modern archival procedures and create a finding aid for the documentation collection.

6. Rehabilitate documentation using acid-free file folders labeled with indelible ink. Place folders in acid-free cardboard boxes and apply adhesive polyethylene label holders, with acid-free inserts, to the boxes.

7. Provide funding to hire an individual with an appropriate background in archeology to assume responsibility over the archeological activities on NAS Whidbey Island.

8. Obtain funding for the proper curation of the associated documentation collection. Follow the standards and guidelines outlined in 36 CFR Part 79.

9. Establish procedures and protocols for the handling of archeological materials.

10. Install appropriate fire-safety and environmental controls in the building where associated documentation is stored.

Reports Related to Archeological Investigations at NAS Whidbey Island

Anderson, Barbara C.
1991 Letter report from Island County Coroner regarding human skeletal remains recovered from Whidbey Island Seaplane Base on August 22, 1991.

Anonymous
1990 *Environmental Assessment of A-12 Siting.* Submitted to the Naval Facilities Engineering Command, Southern Division, U.S. Department of the Navy.

1992 *Environmental Assessment for the A/OA-10 Beddown. McChord AFB, Washington.* Submitted to Air Combat Command, Langley Air Force Base, Virginia, for Boardman Bombing Range, Oregon.

Cliff, Maynard B.
1992 *Boardman Bombing Range Strafing Pit EA Input.* Geo-Marine, Plano, Texas.

Dames & Moore
1993 *Environmental Assessment Boardman Bombing Range Agricultural Land Use Conversion.*

1994 *Draft Submittal—Historic and Archaeological Resources Protection Plan Naval Air Station Whidbey Island, Washington.* Submitted to Engineering Field Activity, Northwest, Naval Facilities Engineering Command, U.S. Department of the Navy, Contract No. N27464 90-D-0060/0015.

Engineering Field Activity, Northwest, Western Division Naval Facilities Engineering Command, U.S. Department of the Navy
1994 *Final Environmental Impact Statement for the Management of Air Operation at NAS Whidbey Island.* Prepared for the Proposed Modification of Air Operations Management at Naval Air Station Whidbey Island, Oak Harbor, Washington.

EDAW, Inc.
1994 *Draft Environmental Assessment for the Fire Fighting Training Facility, Naval Air Station Whidbey Island, Oak Harbor, Washington.* EDAW, Inc., Seattle, Washington.

Gross, Timothy G., Mary Robbins-Wade, and Ruth C. Alter
1994 Cultural Resources Inventory of MILCON Project H-317, Proposed Family Housing Units, at NAS Whidbey Island, Oak Harbor, Washington. Affinis, for RBF/Sholders & Sanford. Submitted to the Naval Facilities Engineering Command, Southwest Division, San Diego, California, Contract No. N68711-93-D-1525.

Lindsay, Lee W., Jr.
1990 *Cultural Resources Survey of Proposed Housing at Whidbey Island Naval Air Station.* BOAS, Inc. Seattle, Washington.

Munsell, David A.
1986 *Oak Harbor Marine Expansion Study Cultural Resources Reconnaissance.* U.S. Army Corps of Engineers, Seattle District.

Naval Facilities Engineering Command, Southwest Division
1994 *Environmental Assessment Military Housing on Seaplane Base Naval Air Station, Whidbey Island, Island County, Washington.*

Rodin, Brigid Henderson
1985 *Chemical Analysis of a Shell Midden 45-IS-81.*

Rose, Janet C.
1984 Research Paper to Determine the Sources and Transport Agents for the Sediments in Shell Midden 45-IS-81.

Souders, K. A.
1994 Letter to Robert Joe, Sr., Chairman, Swinomish Senate regarding human skeletal remains from one individual recovered from NAS, Whidbey Island, Lake Hancock. (Island County Coroner intends to return remains to the Swinomish Tribe.)

Wessen, Gary C.
1988 *Archaeological Investigations at Polnell Point (45-IS-41) Whidbey Island, Washington.* Wessen & Associates, Seattle, Washington. Submitted to Planning and Development Services, Coupeville, Washington.

1988 *Prehistoric Cultural Resources of Island County, Washington.* Wessen & Associates, Seattle, Washington. Submitted to the Office of Archaeology and Historic Preservation, Washington State Department of Community Development, Olympia.

Office of Environmental Management, Naval Facilities Engineering Command, Western Division

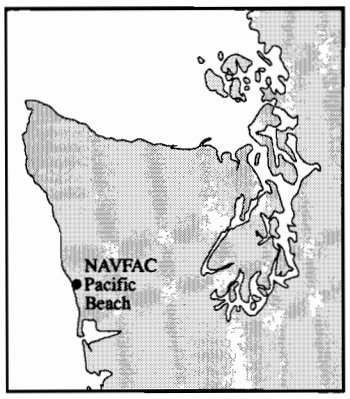
1991 *Military Housing Project FY91 Project No. 90-801-W1.*

1993 *Environmental Assessment Agricultural Land Use Conversion at Naval Weapons Systems Training Facility, Boardman, Oregon.*

24

Naval Facility

Pacific Beach, Washington



Facility Summary

Volume of Artifact Collections: None

Linear Feet of Records: None

Human Skeletal Remains: None

Status of Curation Funding: Not applicable

Status of Facility Repository: Not applicable

NAGPRA Status: Not applicable

Collections Update (October 1997): No updated information at this time.

NAVFAC Pacific Beach, located in Grays Harbor County, Washington, is a 53-acre facility on the west coast approximately 12 miles from Yakima. The name has since been changed to the Pacific Northwest Fleet Recreation and Education Support Center, which is operated expressly for active duty military community; retired personnel and DoD civilians are welcome on a space-available basis. The facilities at Pacific Beach are under the jurisdiction of NAVSTA Puget Sound, Seattle.

In April 1994, St. Louis District personnel performed background archeological research at the State Historic Preservation Office in Olympia, Washington, which included a review of all pertinent archeological site forms, reports, and manuscripts. As of this date, no archeological materials have been recovered from NAVFAC Pacific Beach.

Reports Related to Archeological Investigations at NAVFAC Pacific Beach

Kreutzer, Lee, James C. Woodman, and Bonnie Christensen

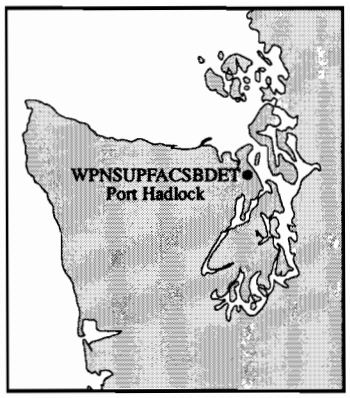
1992 *Cultural Resources Inventory of the Naval Station Puget Sound, Sand Point, Magnolia Family Housing, Pier 90 Quarters, Pacific Beach Facility, Brier, and Paine Field Properties.* HRS, Seattle, Washington.

1993 *Survey Report Historic Resources Survey Properties of Naval Station Puget Sound, Sand Point.* EDAW, Inc., Seattle, Washington, and HRS, Seattle, Washington.

25

Weapons Support Facility, Seal Beach Detachment

Port Hadlock, Washington



Facility Summary

Volume of Artifact Collections: 119 ft^3
On Base: None
Off Base: 117 ft^3 (WSU [see Chapter 51]); 1 ft^3 (Joseph Waterhouse, Sr., residence [see Chapter 52]); 1 ft^3 (Burke Museum [see Chapter 49])
Compliance Status: Collections will require partial rehabilitation to comply with existing federal guidelines and standards for curation. According to Andrefsky et al. (1995:33), the collections at WSU have been rehabilitated. The WSU information reported here was taken from Andrefsky et al. (1995).

Linear Feet of Records: 5.7 linear feet
On Base: 1 linear foot
Off Base: 4.2 linear feet (WSU [see Chapter 51]); < 1 linear foot (Joseph Waterhouse, Sr., residence [see Chapter 52]); 0.5 linear feet (Burke Museum [see Chapter 49])
Compliance Status: Records will require complete rehabilitation to comply with existing federal guidelines and modern archival-preservation standards.

Human Skeletal Remains: None are located at WPNSUPFACSBDET Port Hadlock, but the remains of three individuals are located at WSU.

Status of Curation Funding: Funding for the curation of collections is inadequate.

Status of Facility Repository: WPNSUPFACSBDET Port Hadlock has a temporary dedicated archeological repository at WSU, but no curation agreement has been negotiated between the two parties.

NAGPRA Status: Section 5 NAGPRA inventory has been conducted.

Collection Update (October 1997): No updated information at this time.

Date of Visit: April 13, 1994

Point of Contact: Cindi Kunz, wildlife biologist

WPNSUPFACSBDET Port Hadlock encompasses 2,800 acres on Puget Sound. It is located on Indian Island, off the northeast point of the Olympic Peninsula, approximately 18 miles from the Hood Canal bridge. This land was purchased in 1939, for stowing ammunition and as an arming area for aircraft based at Naval Air Station, Seattle. The facility was constructed

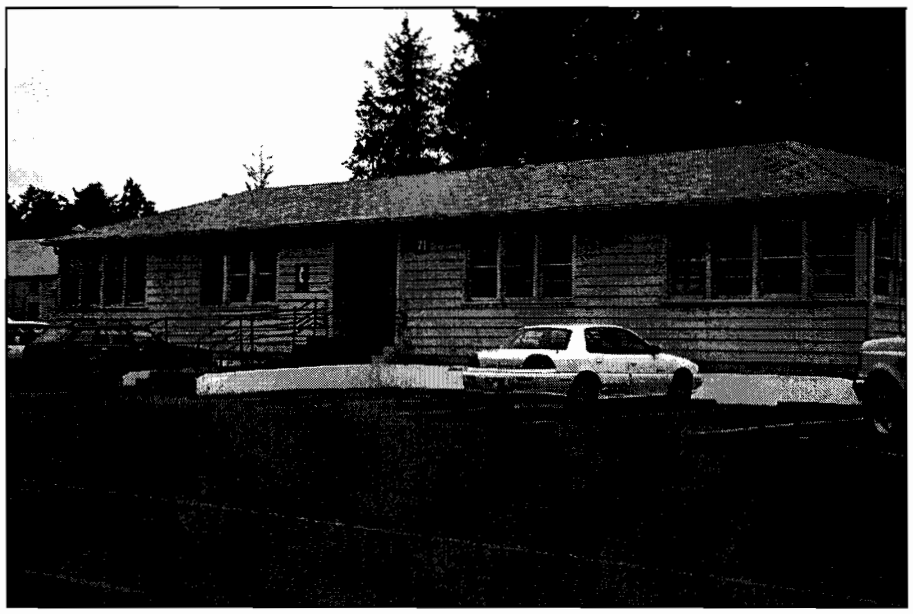


Figure 22. Exterior view of WPNSUPFACSBDET Port Hadlock Building 71.

from 1939 through the early 1940s. In 1959, activity status was reduced, and the facility was used primarily for ammunition storage. In 1979, the facility was reactivated as a detachment of Naval Undersea Warfare Center (NUWC) Keyport, and served as an Ordnance Depot for ammunition storage and for the on- and off-loading of Naval vessels. The base is no longer an NUWC Keyport detachment.

In April 1994, St. Louis District personnel performed background archeological research at the State Historic Preservation Office, Olympia, which included a review of all pertinent archeological site forms, reports, and manuscripts. Research to date indicates that archeological materials recovered from WPNSUPFACSBDET Port Hadlock are housed at WSU (see Chapter 51), the Burke Museum (see Chapter 49), and the residence of Joseph Waterhouse, Sr. (see Chapter 52).

Assessment

All archeological activities at WPNSUPFACSBDET Port Hadlock are the responsibility of the Public Works staff. The person assigned the cultural resource responsibilities is a wildlife biologist. Artifact collections are not kept at the facility, but 1 linear foot of contractual administrative correspondence and final reports are kept in the biologist's cultural resource working files.

Building 71 was built in 1941 to house administrative offices. The building is now the Public Works Building, and the Facility Engineering Support Offices and the person responsible for cultural resources is located there.

Structural Adequacy

Building 71 is a one-floor, aboveground, 4,610-ft^2 structure with a solid concrete foundation. It is wood framed, with wood-sided exterior walls. The roof was replaced in 1982 with one constructed of a composite material. WPNSUPFACSBDET Port Hadlock has a standard policy to replace roofs every 20 years. Building 71 is rated as structurally "adequate" by structural engineers, and there were no signs of cracks or leaks. With the exception of the new roof, and painting, there have been no external or internal renovations of the building (Figure 22).

Archeological documentation is stored in the biologist's 225-ft^2 office (Figure 23). Her office is located in a large room that is shared with at least four other offices. The concrete floor is tiled, and the ceiling has painted wooden panels nailed to wood beams. Interior office dividers include file cabinets, shelves, and one three-quarter

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Weapons Support Facility, Seal Beach Detachment

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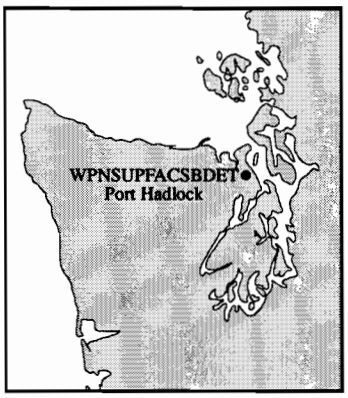

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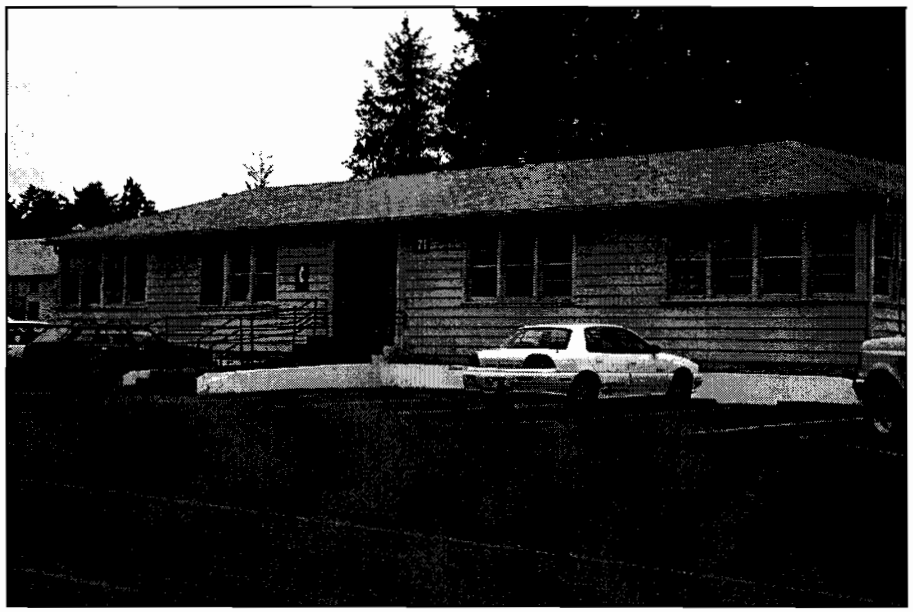

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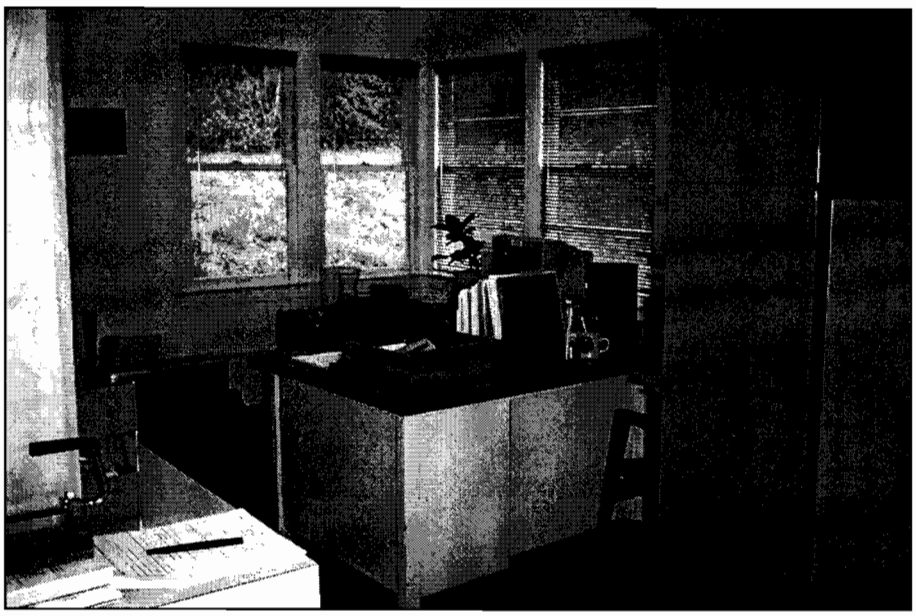


Figure 23. Public Works office in WPNSUPFACSBDET Port Hadlock Building 71.

partition. The four office windows, two facing east and two facing south, have venetian blinds. Asbestos is present in the walls, and possibly around the pipes as insulation. One interior door on the west wall is paneled with wood; it leads from the large, open, office area into a common hallway. Lighting in the offices is provided by natural light through windows and from fluorescent lights; none of these light sources has ultraviolet filters.

Two solid wood double doors on the south wall are the only exterior doors. Windows are located on all four sides of Building 71, measuring 2 x 5 feet (w x h). All of the windows have metal venetian blinds. The wood-framed windows are original to the building, and tend to be drafty.

Environmental Controls

The building is heated by hot-water radiators that are controlled by a thermostat (Figure 24). The boiler used for steam heat is new, and is not located within this building. Space heaters and fans are present in all the offices. No air-conditioning or humidity controls have been installed in Building 71. Dust filters are not present on any of the heating units. Dust does not appear to be a problem, but mildew is. The building is regularly maintained by an off-facility cleaning/janitorial service.

Utilities and support facilities present in the repository include steam-heat radiators, running water in the rest rooms, electricity, telephones, and computer lines. Utilities are original to the 1941 structure, but electrical panels have been added, and the system has been upgraded on an as-needed basis.

Pest Management

The same contractor responsible for the cleaning and maintenance of Building 71 also takes precautions against insects and rodents. Staff members working in Building 71 notify the contractor of any pest problems.

Security

WPNSUPFACSBDET Port Hadlock has posted 24-hour guards at all points of entry into the facility. The inspection team was required to sign in and obtain one-day personnel, vehicle, and camera passes before they were given permission to enter the facility. Security measures for Building 71 include key locks on all the interior and exterior doors. Some of the exterior doors also have dead-bolt locks. All of the windows

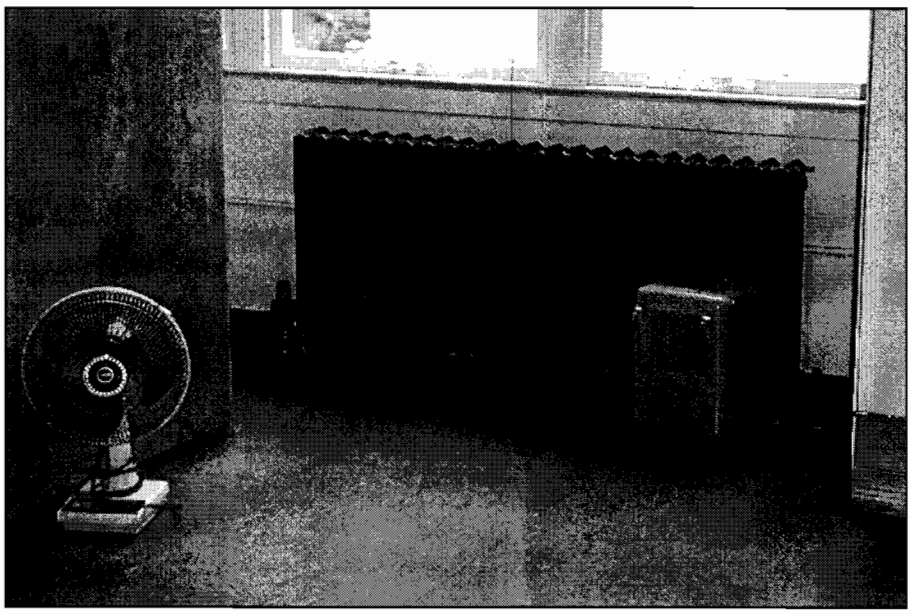


Figure 24. Heat in Building 71 at WPNSUPFACSBDET Port Hadlock is provided by hot-water heaters.

are accessible from the ground level. There was no evidence of unauthorized access through any of the doors or windows, and there has never been a problem with this in the past.

Fire Detection and Suppression

Building 71 does not have a fire-detection system. Fire-safety measures consist of several fire extinguishers and an emergency fire-escape plan. The closest fire extinguisher to the biologist's office is in the hallway.

Records Storage

Approximately 1 linear foot of archeological documentation is located in the biologist's files. One file cabinet drawer and 6 inches of wooden shelving are used for records storage (Figures 25 and 26). Records are kept in three legal-size, acidic, accordion-type file folders. Files labeled "Archaeological Documents" are kept in a file cabinet drawer. Expandable files and reports, including reports of negative findings, are organized on a shelf. Some discoloration and damage was noted on at least one folder. One file was labeled "Historical files 5720," typed on a paper label. Another had been labeled directly with a marking pen. Records date from the early to mid-1970s. Contaminants such as paper clips and staples were noted. Duplicates have not been produced. Locally available alternatives for storage of this material include space within this same building and possibly space in other buildings on the facility.

Paper Records

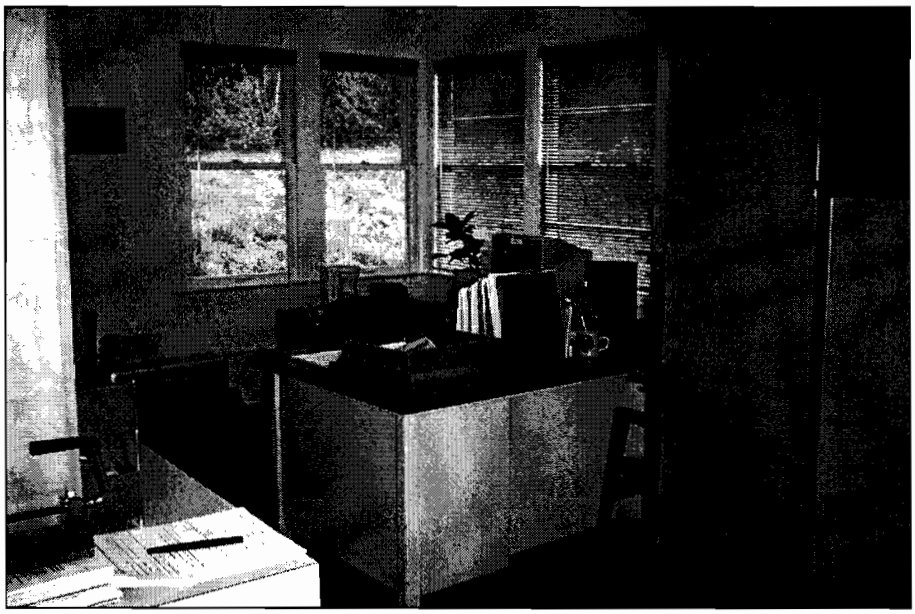
Paper records include administrative documentation such as transcripts of phone conversations, correspondence, scopes of work, background materials on the DoD Legacy Resource Management Program, and National Register of Historic Places nomination forms.

Photographic Records

Photographic records include copies of color photographs of an unspecified site and associated artifacts. These were not stored in archival-quality materials.

Reports

Reports include an Environmental Impact Statement, a progress report on the analyses of materials from site 45JE16, a preliminary report, and a report on excavations at site 45JE16. Additional reports include that of an archeological survey



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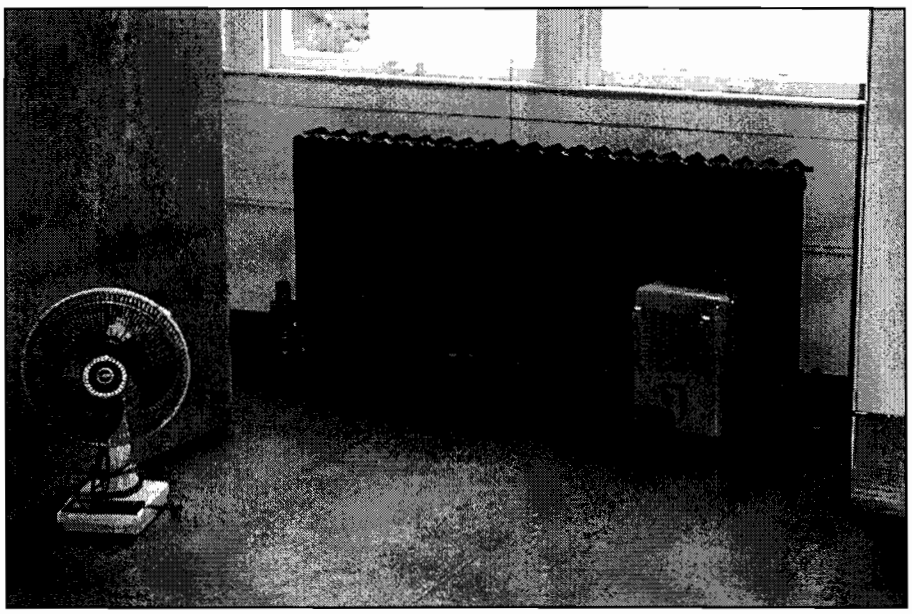

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Figure 25. Metal file cabinet in Building 71 at WPNSUPFACSBDET Port Hadlock is used to store associated records.

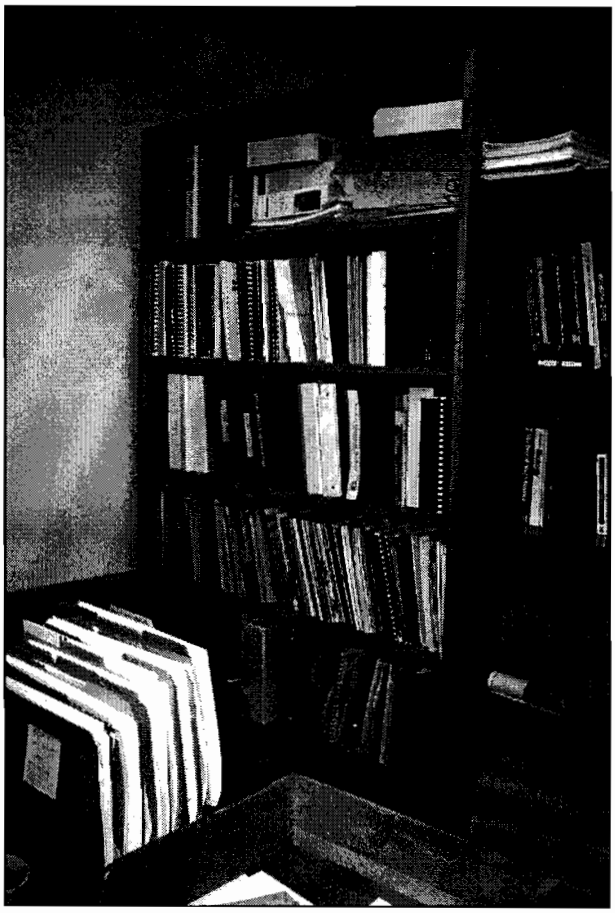


Figure 26. Wooden shelves in Building 71 at WPNSUPFACSBDET Port Hadlock store approximately 6 linear inches of associated records.

and an evaluation report, and survey, of the archeological resources. All reports are bound with nonarchival materials.

Collections-Management Standards

Building 71 has never been designated as a curation repository. Therefore, formal collections-management standards for this facility have not been addressed.

Curation Personnel

No full-time staff member is responsible for the curation of associated archeological documentation from WPNSUPFACSBDET Port Hadlock. At the time of assessment, a wildlife biologist was responsible for records maintenance and security.

Curation Financing

Curation activities for the long-term preservation of associated documentation are not financed.

Access to Collections

All associated documentation is located in the biologist's office. Personnel need the biologist's permission to use any of the records. The four permanent employees who work in the biologist's office area have access to these records. Documentation is readily accessible. A check-out system for records has not been established.

Future Plans

There are no future plans for the curation of archeological documentation.

Comments

1. Curation activities are not funded.

2. Asbestos is present in the building where the documentation is housed.

3. Storage of the associated records from WPNSUPFACSBDET Port Hadlock does not meet modern archival standards.

4. No duplicates of original documentation have been produced.

5. Light sources in the records storage area are not equipped with ultraviolet filters.

6. There are no adequate environmental controls for this facility.

7. There is no fire-detection system, and fire suppression is inadequate.

Recommendations

1. Install sufficient fire-detection and -suppression systems.

2. Install an HVAC system to monitor and regulate the temperature and humidity, and install a dust-filtration system in the records storage area.

3. Place ultraviolet filters on the fluorescent lights in the records storage area.

4. Remove all contaminates from documentation.

5. Create and maintain complete accession records.

6. Regain control over all archeological activities on WPNSUPFACSBDET Port Hadlock and establish contractual agreements with institutions and individuals in possession of collections from WPNSUPFACSBDET Port Hadlock.

7. Duplicate all paper records on acid-free paper, and place the records in acid-free folders labeled with indelible ink. Place all folders in acid-free cardboard boxes and apply adhesive polyethylene label holders, with acid-free inserts, to the boxes.

8. Store the duplicate copies of associated documentation in a separate location that is fireproof and secure.

9. Arrange documentation according to modern archival procedures and create a finding aid for the documentation collection.

10. Provide funding to hire an individual, with an appropriate background in archeology, to assume responsibility over the archeological activities on WPNSUPFACSBDET Port Hadlock.

11. Establish procedures and protocols for the management of archeological documentation.

Reports Related to Archeological Investigations at WPNSUPFACSBDET Port Hadlock

Andrefsky, William, Jr., Paul H. Sanders, Jill M. Wagner, and Lynn E. Mayer
1995 Archaeological Collections Management Plan for Resources from Facilities of Naval Undersea Warfare Center Division and Naval Weapons Station, Seal Beach Detachment, Port Hadlock (Formerly Indian Island Detachment), Keyport, Washington. *Center for Northwest Anthropology, Contributions in Cultural Resource Management* No. 39. Department of Anthropology, Washington State University, Pullman. Submitted to Engineering Field Activity, West, Naval Facilities Engineering Command, San Bruno, California. Department of Defense Legacy Program, Legacy Project No. 39, Contract No. N62474-91-LT-00719.

Blukis Onat, Astrida R.

1975 Progress Report on the Analysis of Material Excavated at 45-JE-16, Indian Island, Jefferson County, Washington.

1976 *Project Report Number 30, Archaeological Excavations at Site 45-JE-16, Indian Island, Jefferson County, Washington.* Washington Archaeological Research Center, Washington State University, Pullman.

1985 Letter report: Archaeological assessment of properties on Indian Island for U.S. Navy. BOAS, Inc., Seattle. Submitted to the Naval Undersea Warfare Engineering Station, Keyport, Washington.

1990 Letter report to Lieutenant Commander Hirsch, Naval Undersea Warfare Engineering Station, Indian Island Detachment, Hadlock, Washington. BOAS, Inc., Seattle.

Blukis Onat, Astrida R., and Trudy Haversat

1977 *Project Report Number 61, Archaeological Excavations at Site 45-JE-16, Indian Island, Jefferson County, Washington: Burial Report.* Washington Archaeological Research Center, Washington State University, Pullman.

Daugherty, Richard D., and Harvey S. Rice

1974 *Archaeological Reconnaissance and Evaluation of Selected areas on NAVTORPSTA, Keyport Indian Island Annex, Washington.* Washington Archaeological Research Center, Washington State University, Pullman.

1975 *A Survey of the Archaeological Resources of Indian Island, Jefferson County, Washington.* Archaeology Research Associates, Pullman, Washington.

Ebasco Environmental

1994 *Addendum to the Archaeological Resources Protection Plan for Interim Removal Action for Sites 11 and 12 Naval Ordnance Center, Pacific Division, Detachment Port Hadlock, Hadlock, Washington.* Ebasco Environmental, Bellevue, Washington. Submitted to the Naval Ordnance Center, Pacific Division, Port Hadlock Detachment, Washington.

Hess, Stump, and Astrida R. Blukis Onat

1990 *Indian Island.* BOAS, Inc., Seattle.

1976 *Draft Environmental Impact Statement, Naval Torpedo Station, Keyport, Washington, Indian Island Annex, Jefferson County, Washington. OICC TRIDENT.* Submitted to the U.S. Department of the Navy.

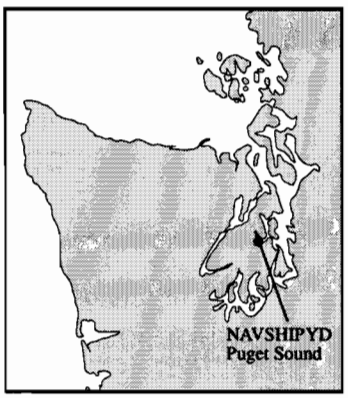
SCS Engineers

1987 *Environmental Assessment for the Proposed Physical Facilities Development Program at the Naval Undersea Warfare Engineering Station Indian Island Detachment.* Naval Facilities Engineering Command, Northwest, U.S. Department of the Navy, Silverdale, Washington.

26

Naval Shipyard, Puget Sound

Bremerton, Washington



Facility Summary

Volume of Artifact Collections: None

Linear Feet of Records: 0.5 linear feet (NAVSHIPYD Puget Sound)
On Base: 0.5 linear feet
Off Base: None
Compliance Status: Records will require complete rehabilitation to comply with existing federal guidelines and standards for modern archival preservation.
Human Skeletal Remains: None

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

Status of Facility Repository: NAVSHIPYD Puget Sound does not have a dedicated archeological repository.

NAGPRA Status: Not applicable

Collection Update (October 1997): No updated information at this time.

Date of Visit: May 25, 1994

Point of Contact: Kira Khadem, historical facilities manager

NAVSHIPYD Puget Sound encompasses approximately 1,393 acres, and is located on the west side of Puget Sound, 60 miles west of Seattle, Washington. During past conflicts the shipyard has seen extensive service, and is currently an active decommissioning site for Naval ships. It is the current port for the ex-U.S.S. Missouri.

In April 1994, St. Louis District personnel performed background archeological research at the State Historic Preservation Office, Olympia, which included a review of all pertinent archeological site forms, reports, and manuscripts. As of this date, no archeological sites have been recorded at this facility. However, a number of relevant reports was noted for NAVSHIPYD Puget Sound.

Assessment

No artifact collections (including human skeletal remains) and less than 1 linear foot of archeological documentation are located at this facility.

Archeological and historical documents are located in Building 448, the Public Works Office for NAVSHIPYD Puget Sound (Figure 27). The facility encompasses 55,702 ft^2. Activity areas within the facility include a receiving/loading dock, a materials/supplies storage area, a records storage area, offices, a mechanical/utility

area, and paint, carpentry, and locksmithing shops.

Structural Adequacy

Building 448, originally constructed in 1938, was built to accommodate Public Works offices. Additions to Building 448 include the construction of both a Paint Shop and Carpenter Shop, in 1941 and 1943, respectively. The structure rests on a concrete foundation. Exterior walls are brick, with the interior walls consisting of wallboard covered with plaster. The roof is a flat asphalt membrane that includes a tarp sealed with tar. It was repaired and upgraded approximately 20 years ago. The roof is solid, with no cracks or leaks. The facility shows no signs of settling, even with nearby pile driving. Building 448 has two floors above ground. There has been interior office remodeling. It is possible that asbestos is present in the walls and foundation, but this has not been confirmed.

Windows in the building measure approximately 3 x 5 feet (w x h). They have aluminum and wooden frames. There are no reported water or air leaks in the window frames. Some window frames have been replaced within the last six years. The windows have metal venetian blinds. All of the utility systems were installed when the building was originally constructed.

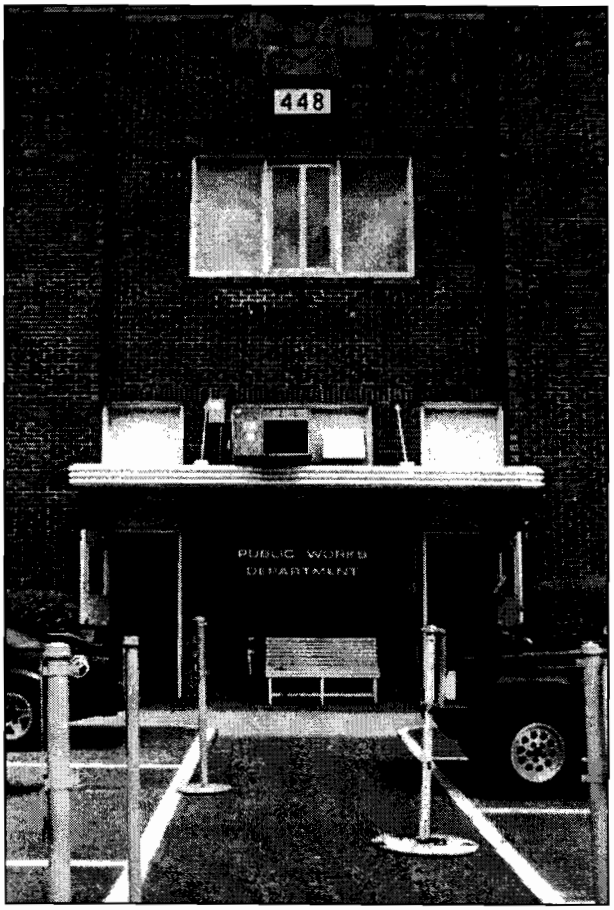


Figure 27. Exterior view of Building 448, which houses the Public Works Department on NAVSHIPYD Puget Sound.

Environmental Controls

The Public Works Building has temperature controls that are operated by the Energy Program Manager. Humidity is not monitored or regulated. In addition, there are no dust filters on the environmental systems. The office area does not have an HVAC system, but is equipped with steam-heat and floor fans. The targeted temperature range in the office is 72°F. Lighting in the office is provided by fluorescent tubes and natural sunlight; the light sources are not provided with ultraviolet filters. The storage area is maintained by Khadem on a weekly basis. Trash removal is through an outside company. If a problem occurs with the building or any of its systems, the in-house Public Works Department provides the maintenance. The paint shop, within the repository, contains hazardous chemicals. However, the shop is not in close proximity to the records storage area.

Pest Management

There is no integrated pest-management program in place at the facility. Pest management consists of control when an infestation is observed. No signs of pest infestation were observed at the time of the assessment.

Security

Security measures consist primarily of restricted access to the shipyard. Electronic card keys allow entry to Building 448. However, card-swipe access to the building is only required on weekends; the facility is open during the week.

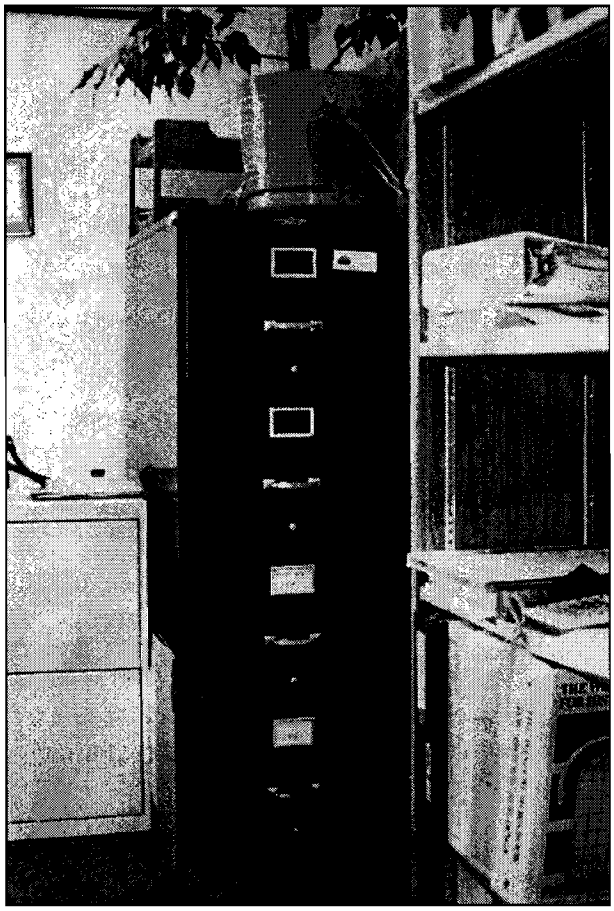


Figure 28. Associated records are stored in this metal file cabinet in Building 448.

Employees and visitors must enter the shipyard under tight security, and be escorted at all times while on base. This building is located within the nuclear materials area, which requires an identification badge and a check of personal identification for entry. Security cameras monitor the outside of the building. There has been no evidence of past unauthorized entry of the facility. Security measures within the office include locks on the windows. The filing cabinets, where associated documentation is stored, are not locked.

Fire Detection and Suppression

Fire detection in Building 448 consists of manual fire alarms, smoke detectors, and heat sensors. The fire alarms are wired into the base fire department. The fire-suppression system consists of a ceiling sprinkler system and fire extinguishers. There are a few smoke sensors located in the building, but none has been placed in the shops. The facility is not fireproof, but meets fire codes.

An overhead pipe for the sprinkler system is present in Khadem's office. The nearest fire extinguisher is approximately 30 feet from her office.

Records Storage

The records storage area is located on the second floor of the Public Works Building. The storage area is Kira Khadem's office, which is separated from other offices by three standard three-quarter wall partitions. The office is backed by an exterior wall with two windows facing east. The floor is carpeted wood, and the ceiling has suspended acoustical tiles. The window frames have been replaced recently, one of which is double framed for thermal stability. There are no screens on the windows, and dust is present.

Records are stored in one acidic file folder kept in a legal-size metal filing cabinet located within Khadem's office area (Figure 28). The area is entirely office space and measures approximately 120 ft^2. There were no photographic records, maps and oversized documents, audio-visual records, or machine-readable records associated with any archeological work on NAVSHIPYD Puget Sound.

Paper Records

Documentation of archeological work at NAVSHIPYD Puget Sound consists of one report that is located in the files, and a historical and archeological resources protection plan that was being typed at the time of the visit. Both are printed on acidic paper.

Reports

The report is on acidic paper and bound with a clear plastic cover. It was stored in acidic hanging files. The report measures approximately 4 linear inches.

Collections-Management Standards

This facility does not have any archeological collections and has not been designated as a curation facility. Therefore, formal collections-management standards have not been addressed in this report.

Curation Personnel

There are no curatorial personnel. Kira Khadem is a historical facilities manager, and is responsible for the records maintenance of all associated archeological documentation for the base.

Curation Financing

Curation activities are not financed.

Access to Collections

All personnel in the building have access to the records. It is not necessary to have Khadem's permission or supervision to use the records.

Future Plans

There are currently no future plans for the curation of the associated archeological documentation located in Building 448.

Comments

1. Asbestos may be present in Building 448.

2. No HVAC system is present.

3. No humidity monitoring or control devices are installed.

4. Light sources do not have ultraviolet filters.

5. Heat vents do not have dust filters.

6. No duplicates of associated archeological documentation have been produced.

7. The pest-management program does not include monitoring.

Recommendations

1. Remove all asbestos from buildings housing associated archeological documentation.

2. Produce duplicates of associated documentation on acid-free paper, file them in acid-free folders labeled with indelible ink, and store in a separate location that is fireproof and secure.

3. Install an HVAC system with dust filters; replace the filters on a regular basis.

4. Install a humidity system that has both monitoring and control devices.

5. Ensure that all light sources are provided with ultraviolet filters.

6. Implement an integrated pest-management program that includes regular pest-monitoring and control practices.

7. Control access to, and ensure the security of, all associated archeological documentation.

8. Establish and maintain appropriate procedures and policies regarding the curation of associated records.

9. Hire personnel, with appropriate background and experience in archeology, to retain administrative control over archeological projects conducted on NAVSHIPYD Puget Sound.

Reports Related to Archeological Investigations at NAVSHIPYD Puget Sound

Dames & Moore
1992 Letter report regarding the removal of underground storage tanks at Jackson Park from Michael S. Kelly to Peter W. Havens, Engineering Field Activities, Northwest, U.S. Department of the Navy, Silverdale, Washington.

Havens, Peter
1991 *Draft Programmatic Environmental Impact Statement for the Fast Combat Support Ship (AOE-6 Class) U.S. West Coast Homeporting Program.*

1994 *Naval Shipyard Puget Sound Pier D Dredging Final Supplemental Environmental Impact Statement.*

Kelly, Michael S.
1992 *Draft-Archaeological Survey of Proposed Naval Hospital Expansion Areas, Bremerton, Washington.* Dames & Moore, Chico, California.

1993 *Archaeological Survey Naval Hospital Bremerton Addition and Parking Garage MILCON P-008, Bremerton, Washington.* Dames & Moore, Chico, California. Submitted to the Naval Hospital, U.S. Department of the Navy, Bremerton, Washington.

Kelly, Michael S., and David W. Powers
1993 *Jackson Park Cultural Resources Survey.* Dames & Moore, Chico, California. Submitted to Engineering Field Activity, Northwest, Naval Facilities Engineering Command, Poulsbo, Washington.

Maupin, W.
1992 Legacy Resource Management Program Questionnaire: Puget Sound Naval Shipyard. Puget Sound Naval Shipyard, Director Engineering Division, Public Works, U.S. Department of the Navy.

Moura, Guy, Cecelia S. Carpenter, and Jeanne M. Welch
1990 *A Cultural Resource Survey of the Proposed Johns Prairie Grael Excavation and Barge-Loading Facility, Mason County, Washington.* Submitted to Manke Lumber Company, Inc., Tacoma, Washington.

Naval Shipyard, Puget Sound, Bremerton, Washington
1991 *Environmental Assessment for Industrial Support Complex, Increment II Military Construction Project P-622 at Puget Sound Naval Shipyard Bremerton, Washington.* Submitted to the Naval Sea Systems Command, U.S. Department of the Navy.

Shapiro and Associates
1990 *Environmental Assessment for the Puget Sound Naval Shipyard Commissary Store.* Shapiro and Associates, Seattle, Washington. Submitted to Engineering Field Activities, Northwest, Western Division Naval Facilities Engineering Command.

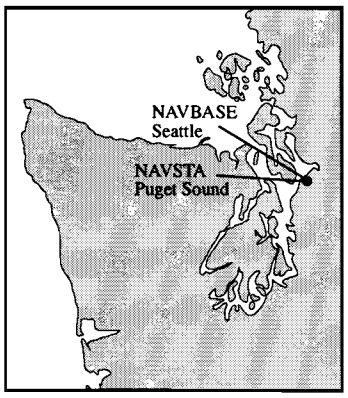
1990 *Historic Resource Survey for the Land Purchase Site Related to Construction of a New Commissary Store at the Puget Sound Naval Shipyard.* Shapiro and Associates, Seattle, Washington. Submitted to Engineering Field Activity, Northwest, Naval Facilities Engineering Command, Poulsbo, Washington.

Tidewater Atlantic Research
1991 *An Assessment of the Potential Impact of Construction Associated with Homeporting AOE-6 Ships on Cultural Resources at the Puget Sound Naval Shipyard Bremerton, Washington.* Tidewater Atlantic Research, Inc., Washington, North Carolina. Submitted to Turner Collie and Braden, Houston, Texas.

27

Naval Station, Puget Sound

Seattle, Washington



Facility Summary

Volume of Artifact Collections: None

Linear Feet of Records: None

Human Skeletal Remains: None

Status of Curation Funding: Not applicable

Status of Facility Repository: Not applicable

NAGPRA Status: Not applicable

Collection Update (October 1997): No updated information at this time.

In 1925, Naval Air Station Seattle, at Sand Point, was established on land donated by King County, Washington. The Army's first around-the-world flight began and ended here. During World War II, this facility operated cargo flights to Alaska and the Aleutian Islands. Following World War II, the base was designated a Naval Reserve Air Station. In 1970, aviation operations ceased. This occurred because Naval Air Station, Seattle, was decommissioned, and such naval operations as supply, billeting, and administration were transferred to other DoD activities and federal agencies.

In 1982, Naval Station Seattle was established as an Echelon 4 activity under the Commander, Naval Logistics Command, Pacific Fleet. In 1986 the name was changed again, to NAVSTA Puget Sound, in order to reflect the expanded fleet support mission at the Seattle and Everett locations. NAVFAC Pacific Beach is under the jurisdiction of NAVSTA Puget Sound, Seattle. NAVBASE Seattle is a tenant command of NAVSTA Puget Sound.

In April 1994, St. Louis District personnel performed background archeological research at the State Historic Preservation Office, Olympia, which included a review of all pertinent archeological site forms, reports, and manuscripts. Several surveys have been conducted on NAVSTA Puget Sound. However, no archeological materials have been recovered at the facility. Additionally, no archeological materials have ever been recovered from NAVFAC Pacific Beach or NAVBASE Seattle.

Reports Related to Archeological Investigations at NAVSTA Puget Sound

Abbott, Donald W., and Lynn L. Larson
1984 *Archaeological and Historical Cultural Resources Survey of the Sand Point Naval Air Station.* BOAS, Inc., Seattle.

EDAW
1994 *Historic and Archaeological Resources Protection Plan for Naval Station Puget Sound, Sand Point, Pier 90, 91 (Seattle), Magnolia Family Housing (Fort Lawton), Kenmore Housing (Brier), Paine Field (Everett), the Pacific Northwest Fleet Recreation and Education Support Center (Pacific Beach), and NSPS Sand Point (Seattle).* EDAW, Seattle.

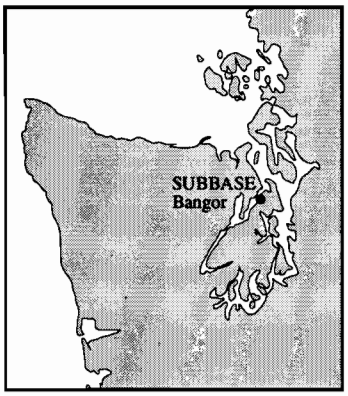
Kreutzer, Lee, James C. Woodman, and Bonnie Christensen
1992 *Cultural Resources Inventory of the Naval Station Puget Sound, Sand Point, Magnolia Family Housing, Pier 90 Quarters, Pacific Beach Facility, Brier, and Paine Field Properties.* HRS, Seattle.

1993 *Survey Report Historic Resources Survey Properties of Naval Station Puget Sound, Sand Point.* EDAW, Seattle, and HRS, Seattle.

28

Naval Submarine Base

Bangor, Washington



Facility Summary

Volume of Artifact Collections: 1 ft^3
On Base: 1 ft^3
Off Base: None
Compliance Status: The collections located at SUBASE Bangor will require partial rehabilitation and should be transferred to an appropriate curation facility.

Linear Feet of Records: < 1 linear foot
On Base: < 1 linear foot
Off Base: None
Compliance Status: Records will require complete rehabilitation to comply with existing federal guidelines and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: At SUBASE Bangor, no funds specifically are appropriated for long-term curation. However, the cost of packaging a project collection is included in contractors' business costs.

Status of Facility Repository: A permanent repository has not been designated.

NAGPRA Status: Based on presently available information for SUBASE Bangor, no NAGPRA Section 5 inventory is necessary.

Collection Update (October 1997): No updated information is available at this time.

Date of Visit: March 12, 1994

Point of Contact: Art Schick, forester

SUBASE Bangor encompasses approximately 7,000 acres on the Hood Canal in Washington's Puget Sound. SUBASE Bangor was established in 1945 as the NAD Bangor Annex, a Pacific Coast transshipment point for ammunition and explosives. In 1973, SUBASE Bangor became the homeport for the new Ohio-class submarine, and in 1974 it was designated the Strategic Weapons Facility, Pacific. In 1977, the base was commissioned as SUBASE Bangor. The facility became fully operational in 1981 with the arrival of the first Trident submarine, the USS Ohio.

In April 1994, St. Louis District personnel performed background archeological research at the State Historic Preservation Office, Olympia, which included a review of all pertinent archeological site forms, reports, and manuscripts. As of this date, only 1 ft^3 of archeological materials has been recovered from SUBASE Bangor.

Figure 29. The Public Works Department offices for SUBASE Bangor are housed in Building 1101.

Assessment

SUBASE Bangor is the repository for a small collection of artifacts from a recent project conducted by Larson and Associates, a cultural resource management contractor from Seattle. The collection is under the care of the base personnel responsible for cultural resources, and is stored with the associated documentation in Room 301, Building 1101 (Public Works Building).

Building 1101, the Public Works Building, is a 5,940-ft^2 office building located at the submarine base in Silverdale, Washington (Figure 29). The entire base, once an ammunition depot, was rebuilt approximately 15 years ago. The Public Works Building has a total of three floors, all aboveground; the first floor was built into the slope of a hill. Activities within the building include Public Works Engineering and Utilities, the Personnel Supply Division, civilian personnel offices, the Family Housing Office, and a cafeteria.

Structural Adequacy

The Public Works Building was constructed in 1984. The foundation and exterior walls are concrete. The roof is built-up tar and gravel. No cracks or leakage were noted in the roof or foundation, which appear to be structurally sound. Interior walls are all moveable to accommodate changes in office space. Building 1101 has heating and air-conditioning systems, water, and electricity, all of which date to the original construction of the building.

Collections are stored in Art Schick's third-floor office, Room 301. Interior walls are plasterboard. The exterior walls are of the same material over metal studs. The floor is tiled concrete. The ceiling is composed of suspended acoustical tile. No overhead pipes are located in the collections storage area.

Environmental Controls

Environment control is maintained through a central air-circulation and -filtration system. Heat is provided through steam registers located on the floor; it is brought in from a central plant, which is being converted from coal to natural gas. Temperatures in the building usually are maintained at 65^0 F. Humidity levels are not monitored or controlled. Building 1101 is asbestos free.

A solid band of aluminum-framed windows surrounds each floor. No evidence of water leakage from the windows was noted. All windows have been replaced within the past 10 years. Windows located in the collections storage area are located on the north and east walls. Venetian blinds provide some control over the natural light. Fluorescent lights, without ultraviolet filters, are also used for illumination.

Pest Management

Pest management in Building 1101 is done on a weekly basis by Johnson Controls, a state-certified pest-management contractor. No signs of infestation were detected during the assessment. However, according to base personnel, mice are a problem because of the proximity of the cafeteria. Johnson Controls uses traps and anticoagulant baits to control the mice population. The work performed by Johnson Controls is regularly evaluated by Navy personnel.

Security

Security measures are also handled by Johnson Controls. A 24-hour security gate controls access to the base. Access is granted with a pass obtained from the Pass and ID Office, where certain credentials must be provided before permission to enter is granted. Doors and windows to Building 1101 have key locks, which are locked after hours. Wood-panel interior doors, which provide direct access to the hallway, also have key locks. No evidence of unauthorized access was detected, and none has been reported in the past. Only the windows on the ground floor are accessible from the outside, and these are kept locked.

Fire Detection and Suppression

A fire-detection system has not been installed in Building 1101, but there are manual fire alarms located in the hallways that are wired into two full-time, on-base fire departments, both operated by Johnson Controls. The in-house fire-suppression system consists only of fire extinguishers. One is located just outside the door to the collections storage area.

Artifact Storage

Archeological materials present consist of ceramics, glass, metal, and other historical-period materials (Figure 30). These were prepared for

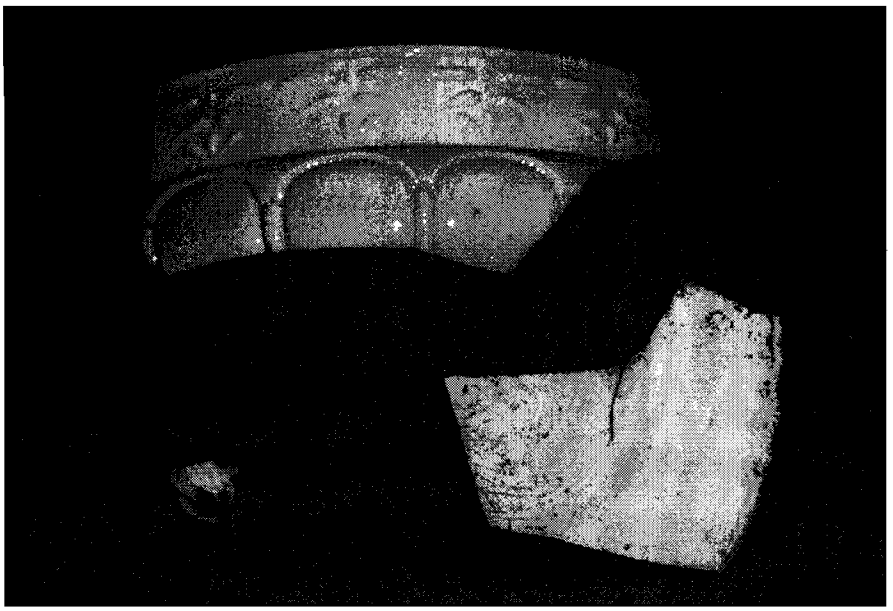


Figure 30. Historical-period artifacts recovered from SUBASE Bangor are stored in Building 1101.

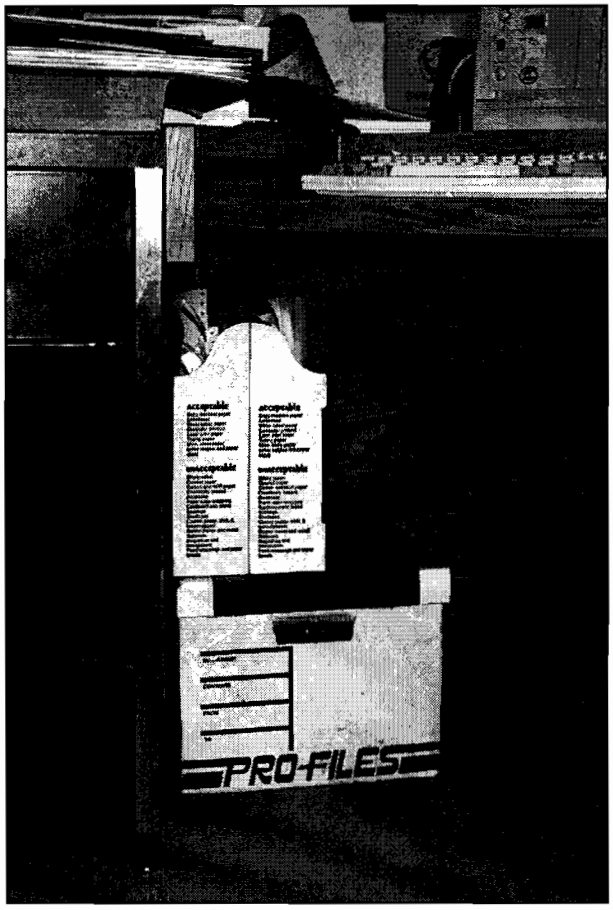


Figure 31. Historical-period artifacts are stored in an acidic-cardboard box under a desk in the forester's office.

storage by the contractor, and then shipped to SUBASE Bangor. Associated documentation is stored in the containers with the archeological materials.

Storage Units

Approximately 1 ft^3 of archeological materials is stored on the floor under the desk of Art Schick, the designated cultural resources coordinator for the base. No storage units have been provided for the storage of these materials.

Primary Containers

The primary container for the collection is an acidic 18-x-12-x-10-inch (l x w x h) box with a telescoping lid (Figure 31). A preprinted acidic adhesive paper label has been placed on the lid with a typed description of the contents, the contractor's name, the date, and the base name.

Table 4.
Summary of Material Classes Present in the SUBASE Bangor Collection, by Percentage

Material Class	%
Historical-period	
Ceramics	20
Glass	65
Metal	10
Other[a]	5
Total	100

Note: Percentages based on total ft^3 of materials in the collection.
[a] "Other" includes shell, soil, and brick.

Secondary Containers

Two-mil zip-lock plastic bags serve as secondary containers. They have been labeled directly with a permanent marker. Label information consists of provenience, date, and the names of people recording the information. Non-archival-quality bubble wrap protects each layer of artifacts. Refer to Table 4 for a summary of material classes present.

Laboratory Processing and Labeling

All artifacts have been cleaned, but not all have been labeled.

Human Skeletal Remains

No human remains are included in this collection.

Records Storage

Records are stored in three locations within one room. Field notes, photographic records, and report copies are stored in one container, an inventory is stored with the artifact collections, and the report is stored on a book shelf (Figure 32).

Paper Records

Paper records consist of computer-generated artifact catalog sheets that are printed on acidic paper. These records are stored in an acidic file folder with a typed acidic paper label, and placed within the artifact collection box. Additional paper records are stored in Room 301, in an acidic box with a telescoping lid. These field notes and pencil sketches are kept in a non-archival, 1.5-inch metal three-ring binder, and labeled with the report titles, dates, and contractors' names. These have been written on a combination of acidic paper and water-resistant graph paper. Photocopies of base-map sections have plotted information and notes written on them in pencil.

Photographic Records

Photographic records include three unlabeled sets of color prints with negatives, which are stored in a three-ring binder. The prints are in their original acidic-paper envelopes within the binder. Negatives are stored in non-archival plastic envelopes. Copies of prints used for the report have been glued to sheets of acidic paper and are labeled in pencil with roll and frame numbers.

Reports

Reports associated with artifact collections are stored on an open metal shelving unit adjacent to the cultural resources coordinator's desk. Additional copies are stored in the box containing field notes and photographs. These are printed on acidic paper and bound with nonarchival materials.

Collections-Management Standards

The Public Works Center has not been designated as a curation facility. However, because artifacts are currently being stored here, collections-management standards have been evaluated.

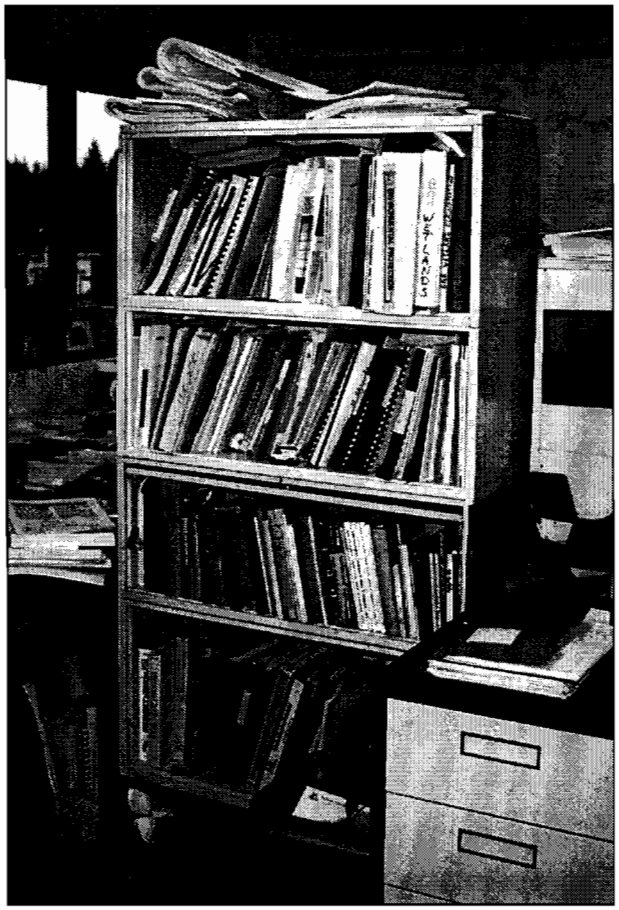


Figure 32. Archeological survey reports for SUBASE Bangor are stored on metal bookshelves in the forester's office.

Registration Procedures

Accession Files

Accession files are not kept.

Location Identification

The location of the collection is not identified.

Cross-Indexed Files

Files are not cross-indexed.

Published Guide to Collections

No published guide to the collections exists.

Site-Record Administration

SUBASE Bangor has relied on the contractor to manage the site-record administration.

Computerized Database Management

A computerized database system is not used to manage archeological collections.

Written Policies and Procedures

Minimum Standards for Acceptance

There are no minimum standards for the acceptance of collections.

Curation Policy

This facility does not have a comprehensive plan for the curation of the artifact and record collections.

Records-Management Policy

A records-management policy for the associated archeological records does not exist.

Field-Curation Procedures

Field-curation procedures have not been written.

Loan Policy

This facility does not have a written loan policy.

Deaccessioning Policy

This facility does not have a written deaccessioning policy.

Inventory Policy

This facility does not have an inventory policy. The initial inventory of artifacts in this collection was provided with the report.

Latest Collection Inventory

The collection was inventoried by Larson and Associates, of Seattle, Washington, in 1992–1993.

Curation Personnel

No professional curatorial staff are employed by SUBASE Bangor. Art Schick, a forester who has been designated the cultural resources coordinator, is responsible for the collection.

Curation Financing

No funding has been budgeted for curation.

Access to Collections

Access to the collection is controlled by the cultural resources coordinator, but any staff member within the office has access to the collection.

Future Plans

Future plans for curation do not exist. A shell midden site may be investigated soon, thus increasing the amount of material stored on base.

Comments

1. The base was not designed as a curation facility.

2. A fire-detection system is not employed.

3. Present fire-suppression measures are inadequate.

4. The base has never been designated as an official curation repository, and collections-management standards have never been established.

5. Original documentation—including photographs, field notes, and sketches—was not physically assessed. Information on these materials was obtained during subsequent telephone conversations.

6. Archeological materials and associated documentation are not properly stored.

Recommendations

1. Place the collection in a suitable curation facility that follows the stipulations of 36 CFR Part 79.

2. Make a duplicate copy of all records and store them in a separate location that is fireproof and secure.

3. In the future, insert a section within the scope of work for archeological projects that addresses

arrangements for the curation of archeological collections and associated documentation.

4. Create and maintain proper accession records.

5. Install a fire-detection system and a dry-pipe fire-suppression system.

6. Place archeological materials in acid-free containers. Four-mil zip-lock polyethylene bags should replace the 2-mil bags currently being used, and should be labeled with indelible ink. Additionally, interior tags made from spun-bonded polyethylene paper should be labeled in indelible ink and inserted into the polyethylene plastic bags.

7. Place associated documentation in acid-free folders and/or acid-free boxes.

Reports Related to Archeological Investigations at SUBASE Bangor

Anonymous
1974 *Draft Environmental Impact Statement for the Trident Support Site, Bangor, Washington.* Submitted to the U.S. Department of the Navy.

1974 *Final Environmental Impact Statement for the Trident Support Site, Bangor, Washington.* Submitted to the U.S. Department of the Navy.

1993 *Environmental Assessment for COMNAVBASE Seattle Administrative Office Building at Submarine Base, Bangor.* Submitted to the Commander, Naval Base Seattle, Silverdale, Washington.

Courtois, Shirley L.
1993 *Survey of Historic Resources at Naval Submarine base Bangor and Camp Wesley Harris.* Parametrix, Kirkland, Washington. Submitted to Naval Facilities Engineering Command, Silverdale, Washington.

Daugherty, Richard D.
1973 *Trident Project at Bangor, Washington.* Submitted to the U.S. Department of the Navy.

Havens, Peter W.
1994 *Environmental Assessment for NAVRESREDCOM 22 Naval Reserve Center, Naval Submarine Base, Bangor, Silverdale, Washington.*

Lewarch, Dennis E., Leonard Forsman, and Lynn L. Larson
1994 *Cultural Resources Overview and Probabilistic Model for Subase Bangor and Camp Wesley Harris, Kitsap County, Washington.* Parametrix, Kirkland, Washington. Submitted to the U.S. Department of the Navy, Silverdale, Washington.

Lorenz, Thomas H.
1978 Archaeological Reconnaissance of SR3, Trident Base Access. Letter report to J. H. Michel, Washington State Department of Highways, Olympia. Office of Public Archaeology, University of Washington, Seattle.

Naval Facilities Engineering Command
1992 *Environmental Assessment for the Dry Dock Calissen Moorage. Delta Pier Drydock Facility at Naval Submarine Base Bangor.*

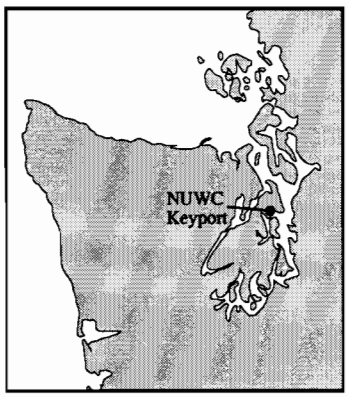
Naval Facilities Engineering Command, Southwest Division
1993 *Environmental Assessment for Navy Family Housing in Kitsap County, Washington.*

Vitro Corporation
1989 *Environmental Assessment Trident D-5 Facilities Upgrade Program at Naval Submarine Base Bangor, Kitsap County, Washington.* Submitted to Strategic Systems Programs, U.S. Department of the Navy, Washington, D.C.

29

Naval Undersea Warfare Center

Keyport, Washington



Facility Summary

Volume of Artifact Collections: None

Linear Feet of Records: 0.5 linear feet
On Base: 0.5 linear feet
Off Base: None
Compliance Status: Records will require complete rehabilitation to comply with existing federal guidelines and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: Curation activities are not funded at NUWC Keyport.

Status of Installation Repository: Not applicable

NAGPRA Status: Because NUWC Keyport has no artifact collections, NAGPRA is not an issue.

Collection Update (October 1997): No updated information is available at this time.

Date of Visit: April 12, 1994

Points of Contact: Art McCandless and Sumner Baltzell, facility engineers

NUWC Keyport encompasses 250 acres. The installation is located 12 miles north of Puget Sound Naval Shipyard, Bremerton, and 5 miles east of SUBASE Bangor. It was commissioned in 1914 as the Pacific Coast Torpedo Station. In 1930, the name was changed to the U.S. Naval Torpedo Station (NTS). In 1950, this installation and the Naval Ammunition Depot (NAD), Bangor, merged to become the U.S. Naval Ordnance Depot, Puget Sound. After NAD Bangor was disestablished, residual functions were transferred to NTS Keyport. NTS Keyport was established as a Hawaii detachment in 1974. In 1976, the Social, Hawthorne, and Indian Island Detachments were established under the administrative control of NTS Keyport. NTS Keyport had another name change in 1978, to the Naval Undersea Warfare Engineering Station (NUWES). In the late 1980s, NUWES Keyport no longer maintained control over the Indian Island Detachment, which became a Seal Beach Detachment, and NUWES changed its name to NUWC Keyport.

In April 1994, St. Louis District personnel performed background archeological research at

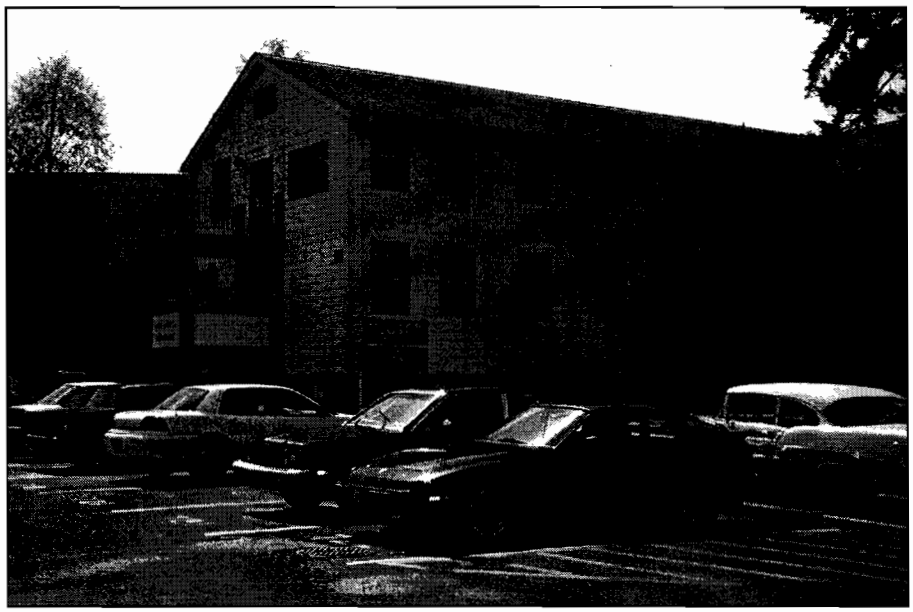


Figure 33. Offices of the Public Works Department are located in Building 94 at NUWC Keyport.

the State Historic Preservation Office, Olympia, which included a review of all pertinent archeological site forms, reports, and manuscripts. No archeological materials have ever been recovered from NUWC Keyport.

Assessment

Built in 1942 as a Bachelor's Enlisted Quarters, Building 94 houses the Public Works Department. It was converted into office space in the 1950s (Figure 33).The building encompasses 10,164 ft^2 and contains offices, rest rooms, a kitchen facility, records storage and study areas, and utility rooms. The utility systems were replaced in the 1960s.

Structural Adequacy

Building 94 is a three-story structure, with two and one-half levels above ground and one-half of the basement underground. The exterior walls are constructed of wooden siding over wooden beams. The built-up asphalt roof has shingles that were replaced in 1989. The roof and foundation are structurally solid and do not show any signs of cracking or leakage.

In 1991, the west wing of the building was extended to provide more office space. The only other external renovations to the building occurred when the building was converted from living quarters to offices in the 1950s. There have been many internal renovations for various office-space changes since that time. No asbestos is present in Building 94.

Environmental Controls

Building 94 has a steam-heat system equipped with thermostat controls. There are no dust filters in the system. There are no air-conditioning or humidity-monitoring or -control systems in place. The offices are regularly maintained by a professional cleaning company.

The windows have aluminum frames that were replaced approximately 10 years ago. Every window measures 2 x 3 feet (w x h) and has metal venetian blinds. There is no evidence that the window frames leak water or air. There is also no evidence of water damage to either the building or the associated archeological records.

Pest Management

A contracted company, Johnson Controls, is responsible for the pest-management program. Precautions are taken against insects and rodents on an as-needed basis. Personnel in the building have never noticed a pest-infestation problem.

Security

The base is secured by 24-hour guards who control access to the base. Building 94 has electronic card-key identification boxes on all exterior doors. Base police patrol the area on a 24-hour basis. There is no evidence of unauthorized access through any of the windows or doors.

Fire Detection and Suppression

Fire-safety devices present in the building include fire extinguishers on all floors and a manual fire alarm wired directly to the base fire department. Building 94 does not have a sprinkler system installed.

Records Storage

Associated archeological records are stored in the office space of Art McCandless (Figure 34). The 75-ft^2 office has a desk, shelving units, and file cabinets. The office is carpeted, and its ceiling has suspended acoustical tiles and fluorescent lights without ultraviolet filters. The office-boundary walls are standard three-quarter office partitions. A 2 x 3-foot (w x h) aluminum frame window with a latch lock is in the west exterior wall. Dust can be a problem, because of a lack of dust filters on the heat registers. A portable electric fan is used in this office space. A professional cleaning company, DC Cleaners, empties the office trash twice a week and cleans the offices once a week. The only pipes present are condensation return pipes along the exterior walls.

Paper Records

Paper records (Figure 35) consist of administrative records, including correspondence and a scope of work. All records are on acidic paper. No duplicate copies have been produced. Records are filed chronologically. Contaminants such as paper clips and staples are present on the records.

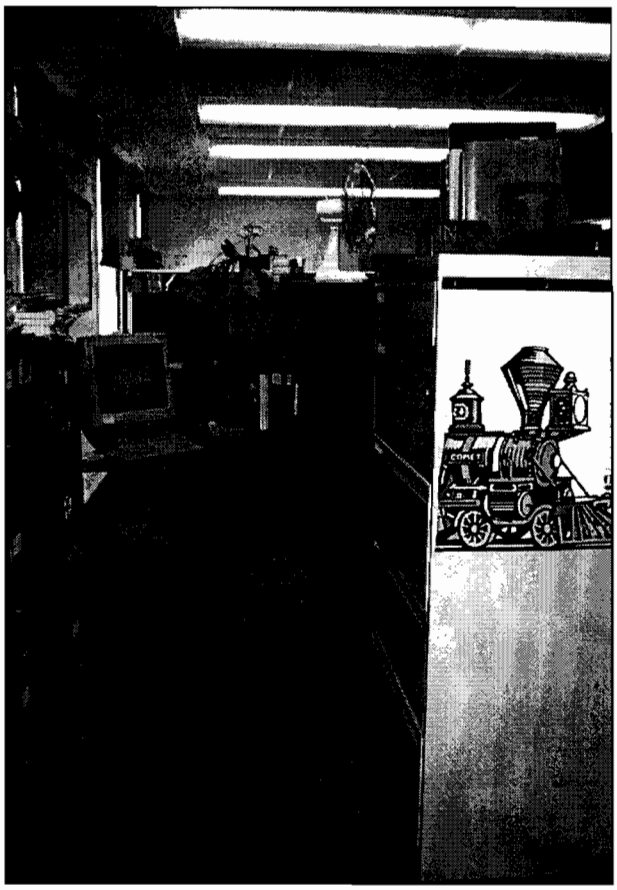


Figure 34. Associated records are stored in metal file cabinets in the facility engineers' office.

Reports

Reports include a Cultural Resources Assessment of USNR Toandos Peninsula; letter reports from Dr. Astrida R. Blukis Onat, of SCCC, regarding materials found on Indian Island; an Archaeological Resource Assessment for NUWES Keyport in Jefferson and Kitsap counties; and a report on an excavation of site 45-JE-16, Indian Island (WPNSUPFACSBDET Port Hadlock), by Dr. Blukis Onat. No reports have been duplicated. Nonarchival materials are used to bind the reports.

Collections-Management Standards

This facility does not house any archeological collections, and is not considered a permanent repository. Therefore, formal collections-management standards have not been addressed in this report.

Curation Personnel

No curatorial personnel are employed at NUWC Keyport.

Curation Financing

Curation activities are not financed by this facility.

Access to Collections

Archeological collections from NUWC Keyport are not located on the base. Access to the associated documentation is with the permission of Art McCandless or Sumner Baltzell, who are responsible for records security.

Future Plans

Currently, there are no future plans for the curation of the associated documentation located at NUWC Keyport.

Figure 35. View of the records from archeological and environmental compliance projects at NUWC Keyport.

Comments

1. There is no air-conditioning or humidity-monitoring or -control systems in Building 94.

2. Building 94 has an inadequate fire-suppression system.

3. There is a lack of procedures and policies regarding the care of associated documentation.

4. There are no designated cultural resource personnel to retain administrative control over archeological materials associated with NUWC Keyport.

Recommendations

1. Install an HVAC system. If this is not feasible, install an air-conditioning system and a commercial dehumidifier. Monitor and control humidity.

2. Install an adequate fire-suppression and -detection system.

3. Hire personnel, with appropriate background and experience in archeology, to retain administrative control over archeological activities at NUWC Keyport.

4. Duplicate associated documentation on acid-free paper, and file in acid-free folders labeled with indelible ink.

5. Duplicate records should be stored in a separate location that is fireproof and secure.

6. Develop and maintain protocols regarding the care and use of associated documentation.

Reports Related to Archeological Investigations at NUWC Keyport

Andrefsky, William, Jr., Paul H. Sanders, Jill M. Wagner, and Lynn E. Mayer
1995 Archaeological Collections Management Plan for Resources from Facilities of Naval Undersea Warfare Center Division and Naval Weapons Station, Seal Beach Detachment, Port Hadlock (Formerly Indian Island Detachment), Keyport, Washington. *Contributions in Cultural Resource Management* No. 39. Center for Northwest Anthropology, Department of Anthropology, Washington State University, Pullman. Submitted to Engineering Field Activity, West, Naval Facilities Engineering Command, San Bruno, California. DoD Legacy Resources Management Program, Project No. 39, Contract No. N62474-91-LT-00719.

Anonymous
1990 *Environmental Assessment for the Proposed High Energy Test Facility (MILCON Project P-334) at the Naval Undersea Warfare Engineering Station Ordnance Annex.* Naval Undersea Warfare Engineering Station, Keyport, Washington.

1992 *Environmental Assessment for the Proposed Keyport/Bangor Dock Expansion (MILCON Project P-343).* Naval Undersea Warfare Center Division, Keyport.

Hess, Sean C., Astrida R. Blukis Onat, and Sheila A. Stump
1990 *Archaeological Resource Assessment of Naval Undersea Warfare Engineering Station Properties in Jefferson and Kitsap Counties, Washington.* BOAS, Inc., Seattle, Contract No. N62474-89-5371.

Kennedy, John H.
1990 Report on Emergency Discovery Notifications to the Secretary of the Interior Under PL 93-291. EDS Notification #: 90-DON-007. Letter report to Richard Waldbauer, Archeological Assistance Division, National Park Service, Washington, D.C.

Stilson, Leland M.
1987 *Cultural Resource Assessment of the Proposed Hyper-Fix Navigational Beacon Antenna, U.S. Naval Reservation, Toandos Peninsula, Jefferson County, Washington.* Peak & Associates, Sacramento, California.

1987 *Cultural Resource Assessment of a Hyper-Fix Navigational Beacon Antenna near the U.S. Coast Guard Lighthouse at North Head, Pacific County, Washington.* Peak & Associates, Sacramento, California. Submitted to Naval Sea Combat System Engineering.

1987 *Cultural Resource Assessment of the Robinson Point, Washington for the Hyper-Fix Navigational Beacon Antenna.* Peak & Associates, Sacramento, California. Submitted to the U.S. Department of the Navy, Norfolk, Virginia.

30

Antelope Valley Indian Museum

Lancaster, California

Repository Summary

Volume of Artifact Collections: 7.5 ft^3

Collection Origin: OLF San Nicolas Island and San Miguel Island

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

Linear Feet of Records: < 1 linear foot

Compliance Status: Associated documentation will require complete rehabilitation to comply with current federal guidelines and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: Funding is through the California State Parks and Recreation budget.

Collection Update (October 1997): A major upgrade of Navy materials at the Antelope Valley Indian Museum was completed during 1997. All artifacts were relabeled as necessary, repackaged, placed in a new metal storage cabinet, entered into an electronic database (Argus), and photographed. All photographs and written documentation have been placed on CD-ROMs for long-term use.

Date of Visit: December 16, 1993

Point of Contact: Edra Moore, curator

The Antelope Valley Indian Museum (Figure 36) curates approximately 7.5 ft^3 of archeological material from San Nicolas and San Miguel Islands in two buildings, each of which contains a repository. Repository 1, in the main museum building, is dedicated to the display of Channel Islands artifacts. Repository 2 (Figure 37), a cabin built during the 1940s, serves as a second storage facility.

The state of California acquired the property on which the museum is located in 1979. The museum building was constructed during 1928–1932 by amateur archeologist H. Arden Edwards, to house his personal archeological and ethnographic North American collections. In 1938 the estate was sold to Grace Oliver, who combined her own collection with those belonging to Edwards. She disposed of all documentation associated with Edwards's collections, including instructions for use of the personal coding system he had developed for labeling the artifacts. Some of the artifacts still bear Edwards's labels and markings, which note the island of origin; however, provenience information for many artifacts has been lost. At the time of the assessment, the only known inventory of the collections was conducted after the state of California acquired the facilities in 1979. The ownership of and responsibility for these collections is confused. This issue should be addressed and resolved to ensure

Figure 36. Exterior view of the Antelope Valley Indian Museum.

Figure 37. Channel Islands artifacts are housed in this repository.

that the curation needs of this collection are met. Refer to Table 5 for a summary of material classes present in the collection. Because that provenience information for many artifacts has been lost, only a rough estimate of the percentages of artifacts from San Nicolas and San Miguel Islands could be made.

Assessment of Repository 1

Repository 1 is a historic structure listed in the National Register of Historic Places. It is a multilevel, 4,500-ft^2 building that was built into the surrounding land and rock of the California

Table 5. Summary of Material Classes Present in the San Nicolas and San Miguel Islands Collections at the Antelope Valley Indian Museum, by Percentage

Material Class	%
Lithics	23
Faunal remains	17
Shell	56
Other[a]	4
Total	100

Note: Percentages based on total ft^3 of materials in the collection.
[a] "Other" includes wood, textiles, and feathers.

desert. This repository has a room (Figure 38) devoted to the display of artifacts collected on the Channel Islands. The collections storage room for Channel Islands artifacts encompasses 1,000 ft^2. Approximately 70 percent of the museum's total exhibition space is devoted to these collections.

Structural Adequacy

Repository 1 has a stone floor and a wooden roof. Its interior and exterior walls are built of wood planks and boulders. The roof, replaced in 1985–1986, and ceiling display evidence of water damage. Some of the walls were replaced in the 1940s by Oliver, but some walls and supporting beams remain unstable. Structural engineers who evaluated the condition of the museum stated that a complete rehabilitation is necessary in order to maintain the historical integrity of the building.

The plumbing and electrical systems in Repository 1 were upgraded in the early 1940s. No significant improvements or renovations have been made to the utility systems since then. The structure's windows and doors (solid wood) are in wooden frames and are original to the structure. Evidence of air and water leakage was noted by the St. Louis District team. The windows are of various sizes and do not have shades or blinds. Windows on the south side of the museum have ultraviolet-protectant film on them.

The collections storage and exhibition room in which the Channel Islands artifacts are displayed is entered through a narrow stairway formed by the stone foundation of the building. It is located at the back of the ground floor, in the central exhibit area. The floor of the room is a combination of poured concrete and rock, and the exterior walls are constructed of boulders and wood.

Figure 38. San Nicolas Island artifacts are stored in Plexiglas cases in the museum.

A number of wood-framed windows are located high on the exterior walls, near the roof. Two are on the south wall, three are on the north wall, and five are on the west wall. Each window measures approximately 2 x 2 feet (w x h) and is accessible from the outside by a ladder. None of these windows has blinds or ultraviolet protection, and all are original to the structure; difficulty in accessibility precluded a damage assessment. Several small Plexiglas windows have been fitted in the gaps between the stone and the wooden structure. These Plexiglas windows are of various shapes and sizes.

Two solid-wood doors in the collections storage and exhibition room provide access to the interior and exterior of the museum. One interior door on the south wall leads to the narrow steps into the central exhibit area. The exterior door is located on the north wall.

Environmental Controls

Environmental controls present include heating by a forced-air furnace system and air-conditioning by condensing coolers. The interior temperature varies from 40 to 100°F. There are no dust filters present. Humidity levels, which range from 5 to 85 percent, are monitored but not controlled. Light sources in Repository 1 are ultraviolet-filtered fluorescent tubes and nonfiltered natural light. Repository 1 and the collections storage room are maintained on a daily basis by California State Parks and Recreation employees.

Pest Management

A professional pest-management consultant is contracted to control and monitor pest infestations. Sticky traps are used for monitoring. An exclusion program has been designed to prevent the entrance of pests; all holes and gaps in the building are plugged, and screens have been placed on all windows. Repository 1 has had problems with insect and rodent infestation; however, the current director and her staff thoroughly cleaned this repository when she was hired. No signs of pest infestation were observed during the site visit.

Security

An intrusion alarm is monitored by a contracted security company in Los Angeles, which notifies the police department in the event of an intrusion. Motion detectors are located in every museum room, and every window has a breaking-glass detector. Staff are responsible for controlling access into and around the museum and indicate that there has never been unauthorized access into the museum through the windows or doors. However, vandalism has occurred on the property. Both exterior doors have dead-bolt locks and are wired with an intrusion alarm. The north exterior door has several small holes in the wood where knots have fallen out and where locks have been installed and removed.

Fire Detection and Suppression

Smoke detectors, monitored by a contracted company, have been installed in each room within the museum. Fire extinguishers are located throughout the museum. In the event of fire, the company notifies the local fire department. There is a smoke detector on the wood-beam rafters in the collections storage room. A halon fire extinguisher, last inspected in November 1992, is located on the north wall, adjacent to the exterior door.

Artifact Storage

Storage Units

Artifacts on display in Repository 1 are in several 3-x-3-x-1-foot (w x h x d) wood-framed exhibit cases attached to the wall (Figure 39). These cases have glass faces, which are secured with screws.

Primary Containers

Artifacts are exhibited on the original mounts designed by Edwards. The artifacts are attached to acidic-cardboard squares, some with an unidentified glue and some with thin wires.

Secondary Containers

There are no secondary containers for the artifacts housed in Repository 1.

Laboratory Processing and Labeling

All of the artifacts on display in Repository 1 have been cleaned, and labeled with Edwards's coding system. However, the labels, which were applied directly onto the artifacts in black or white ink under a clear cover, have yellowed with age. The director has been successful at deciphering a portion of Edwards's code. Unfortunately, the provenience for many of the artifacts is problematic.

Human Skeletal Remains

No human skeletal remains are being curated at this repository.

Assessment of Repository 2

After acquiring the property, Oliver built several small one-story cabins near the original building, one of which serves as Repository 2. This repository encompasses approximately 400 ft^2, with 80 ft^2 devoted to the storage of archeological collections.

Structural Adequacy

Repository 2 is a wood-framed cabin with a wood-shingled roof and a poured-concrete foundation. No renovations have been made to the structure. The plumbing and electrical systems are original to the structure. The wood-framed windows are approximately 2 x 2 feet (w x h) and are partially covered by venetian blinds; the windows show no signs of leakage.

The 80 ft^2 collections storage room has a concrete floor, a wood-and-beam ceiling, and interior walls that are painted plasterboard. This room was originally used as a bedroom. Two wood-framed windows, one facing north and one facing south, are original to the structure and show no signs of air or water leakage. There is one interior wood-panel door that leads to the cabin interior. The collections storage room is cluttered with boxes of artifacts and open drawers stacked on top of each other.

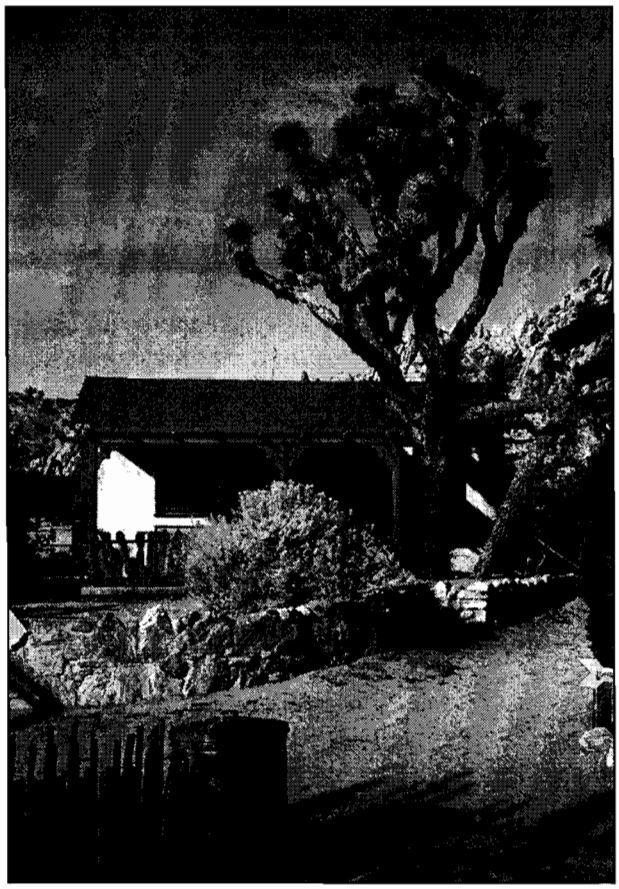


Figure 39. Exterior view of Repository 2 at the Antelope Valley Indian Museum.

Environmental Controls

Repository 2 does not have functional heating or air-conditioning systems. This structure also does not have monitors or controls for humidity. Light is provided by uncovered, nonfiltered incandescent bulbs and by natural light. Staff clean the building on an as-needed basis. Excessive dirt and dust were present in Repository 2 during the site visit.

Pest Management

There is not an effective pest-management program in place. An abundance of spider webs and

other signs of pest infestation were noted during the site visit.

Security

Unlike Repository 1, Repository 2 does not have an intrusion alarm. The two exterior doors have key locks, and the windows have metal clasp locks. A professional security system is not used. Staff members state that there has never been an unauthorized entry into the building, but all windows may be easily accessed from the ground. Access to the building is limited to a few keys distributed among the staff.

Fire Detection and Suppression

Repository 2 does not have a functional fire-detection and -suppression system. The single fire extinguisher in the repository, located within the doorway of the collections storage room, was last inspected in November 1992.

Artifact Storage

Storage units in Repository 2 are old, wooden shelving units that are 54 x 71.5 x 20 inches (w x h x d). Portions of the wood are painted and chipped, and there are no labels on any of the shelving units.

Primary Containers

Primary containers (Figure 40) are painted wooden drawers, on broken runners, in shelving units. Some drawers have collapsed because of the weight of the artifacts and the fact that they are composed of deteriorated wood and stacked on top of each other. Drawers are labeled with acidic-paper tags written on in pencil, in metal label holders. Collapsed shelving units have broken some of the faunal remains and shell.

Secondary Containers

Secondary containers include acidic-cardboard squares that artifacts have been glued or wired to (58%), loose storage in drawers (22%), acidic-cardboard boxes (12%), and acidic tissue paper (8%).

Figure 40. Primary storage containers for materials in Repository 2 consist of painted wooden drawers.

Laboratory Processing and Labeling

Artifacts stored in the wooden drawers have been cleaned and sorted by material class. Approximately 70 percent are labeled directly with ink and covered with clear acrylic that has yellowed. Labels have faded and are in dire need of conservation. Edwards's original labels were in his own code and an attempt should be made to completely decipher his system. Because most of Edwards's documentation is missing, most of the provenience information for these artifacts has been lost.

Human Skeletal Remains

No human skeletal remains are being curated at this repository.

Assessment of Both Repositories

Records Storage

At the time of the assessment, the only associated documentation for the artifacts curated at the Antelope Valley Indian Museum consists of a computer-generated inventory list that was created by the state of California when it acquired the museum in 1979. This inventory is in a three-ring binder located in the director's office.

Collections-Management Standards

Registration Procedures

Accession Files

The museum does not have accession files for the artifacts curated at this facility.

Location Identification

Locations of the artifacts, if known, are included in the inventory.

Cross-Indexed Files

There are no files associated with these collections.

Published Guide to Collections

No guide to the collections has been published.

Site-Record Administration

Federal collections located at this facility have a private collector's site-numbering and labeling system.

Computerized Database Management

Museum staff recently began using the Argus program to catalog their artifacts. Backup files are created on computer disks daily, and are stored in a fireproof safe.

Written Policies and Procedures

Minimum Standards for Acceptance

The Antelope Valley Indian Museum includes the state of California's guidelines for the acquisition of collections in their *Museum Collections Management Handbook.* These guidelines, developed for the California Department of Parks and Recreation, state that their museums have "charge and possession of objects that illustrate and document the cultural and natural heritage of the State of California." Acquisition of archeological objects are subject to a set of criteria stated in the management policies. Included in these criteria are points that address: (1) significant benefits to the public; (2) tangible benefits to the State Park system; (3) an identified plan for use; (4) an acceptable impact on the department in terms of security, maintenance and storage costs; and (5) the possible loss to future generations.

Curation Policy

The museum follows State of California Parks and Recreation guidelines for museum management. Museum staff determine the museum collections' significance, their short- and long-term purpose, environmental conditions, storage capacity, and the preservation and conservation needs of the objects. Staff then prepare the object for exhibit, research, storage, transfer, and possible loan.

Records-Management Policy

Specific forms in the State of California Parks and Recreation *Museum Collections Management Handbook* are available to museum staff for the acquisition, registration, loan, and deaccessioning of objects. However, the museum has very little associated documentation with its collections.

Field-Curation Procedures

Fieldwork is not sponsored by the museum. No policies or procedures for the curation of materials obtained in the field have been established.

Loan Policy

Staff follow published state guidelines for loans. A written loan request must be sent to the registrar, and the loan must be approved by the museum's committee.

Deaccessioning Policy

According to the State of California Parks and Recreation *Museum Collections Management*

Handbook, the museum's registrar must chair the deaccessioning committee, which can approve deaccession proposals and methods of disposal. A permanent record is filed for any deaccessioned object.

Inventory Policy

An inventory policy has not been developed by the museum.

Latest Collection Inventory

The state of California did the last, and possibly only, artifact inventory when the state acquired the museum in 1979.

Curation Personnel

Edra Moore has an M.A. in anthropology from California State University, Hayward. She is the curator of the Antelope Valley Indian Museum and the only permanent, full-time staff member. Additionally, the museum has approximately 100 volunteers, who staff the museum during hours it is open and conduct fundraising.

Curation Financing

Curation activities are supposed to be financed through the State of California Parks and Recreation annual budget; however, the museum has received little or no funds. The director is currently applying for preservation grants to stabilize and conserve the artifacts, which are deteriorating rapidly.

Access to Collections

The Antelope Valley Indian Museum welcomes all visitors, and allows anyone with a legitimate research request to study the collections. Access to collections is controlled by staff.

Future Plans

The museum director plans to upgrade security by implementing a 24-hour guard system. Plans are being formulated to improve documentation storage, protection, and the conservation of artifacts and associated documentation. The staff are actively working on improving access to the collections to facilitate the conservation, preservation, and study of the artifacts.

Comments

1. Artifacts are deteriorating and should be rehabilitated.

2. Halon fire extinguishers in the exhibit area are an environmental hazard.

3. Repository 1 was determined to be structurally unstable.

4. Temperature and humidity ranges have extreme fluctuations.

5. Storage space for associated documentation and artifacts is inadequate.

6. The museum does not have enough professional staff to adequately maintain the collections.

7. Artifacts have been damaged by exposure in open drawers, overcrowding, and improper storage techniques (e.g., drawers stacked on top of each other).

8. Due to the lack of documentation, provenience information for many artifacts is merely estimated.

Recommendations

1. Install environmental controls, including an HVAC system, a humidity-monitoring and -control system, and a dust-filtration system.

2. Upgrade the structural stability, utility systems, security system, and fire-suppression and -detection system for the museum (Repository 1) and cabin (Repository 2) to meet the federal standards outlined in 36 CFR Part 79.

3. Employ additional staff to rehabilitate and maintain archeological collections and associated documentation.

4. Use an integrated, computerized database-management system to manage collections.

5. Eliminate natural light sources from collections and associated-documentation storage areas. Ensure that incandescent bulbs and fluorescent tubes have ultraviolet filters.

6. Develop and implement an emergency-management plan.

7. Replace primary containers with acid-free cardboard boxes. Label unlabeled artifacts (30%) with indelible ink to prevent information loss if artifacts are separated from provenience information.

8. Apply adhesive polyethylene label holders, with acid-free paper inserts, to the boxes. Labels should no longer be applied directly to the boxes. When label information or box contents change, inserts can be replaced, thus reducing the chance for conflicting and confusing information.

9. Appropriate documentation must be produced and maintained regarding the archeological collections. Duplicates of documentation should be made on acid-free paper and stored in a separate, fire-proof, secure location.

10. Replace secondary artifact containers with 4-mil, zip-lock, polyethylene bags, and label these with indelible ink. Additionally, interior labels made from spun-bonded, polyethylene paper (e.g., Nalgene polypaper) should be labeled in indelible ink and inserted into the polyethylene bags.

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Archaeological Resource Service

Petaluma, California

Repository Summary

Volume of Artifact Collections: 1 ft^3

Collection Origin: Mare Island Naval Shipyard
Compliance Status: Collections will require complete rehabilitation to comply with existing federal guidelines and standards for curation.

Linear Feet of Records: 3.3 linear feet

Compliance Status: Associated documentation will require complete rehabilitation to comply with current federal guidelines and modern archival-preservation standards.

Human Skeletal Remains: None

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

Date of Visit: September 14, 1993

Points of Contact: William Roop and Katherine Flynn, archeologists

Approximately 1 ft^3 of artifacts and 3.3 linear feet of associated documentation from Mare Island Naval Shipyard is being temporarily curated at Archaeological Resource Service (ARS). Refer to Table 6 for a summary of material classes present in the collection. The St. Louis District team examined all artifacts and documentation from Mare Island Naval Shipyard that are located at ARS. No arrangements have been made for the curation of this collection. Artifacts were recovered during the monitoring of construction on the island. ARS has been temporarily storing these materials with no support or guidance.

Table 6. Summary of Material Classes in the Mare Island Naval Shipyard Collection at Archaeological Resource Service, by Percentage

Material Class	%
Prehistoric	
Lithics	50
Faunal remains	10
Soil	10
Historical-period	
Glass	3
Metal	21
Brick	3
Other	3
Total	100

Note: Percentages based on total ft^3 of materials in the collections.

Assessment

At the time of the assessment, ARS was located in an office building within an industrial park in Petaluma, California. The ARS office, which consisted of a ground floor and a mezzanine level built for additional storage space, encompassed approximately 2,000 ft^2. Offices and records storage occupied the first floor of the building; most artifact collections were stored on the mezzanine level. Additionally, an artifact holding, washing, and processing area, and a receiving dock, library, equipment-storage room, and rest room occupied areas within the ARS office.

Structural Adequacy

When assessed, ARS was located in a single-story structure constructed in the early 1980s, which is divided into office space for several companies. The building is constructed of concrete and steel. It has concrete exterior walls, a tar-paper roof, and a ceiling made of 2-x-8-inch joists covered with plywood decking. Offices are divided into separate rooms or areas using wood-framed-plasterboard-and-plaster walls.

The mezzanine level, which occupies the south and west half of the office, has a floor constructed of plywood, supported by 2-x-6-inch boards, surrounded by a railing made of 2-x-4-inch boards. Approximately 700 ft^2 of additional storage space is provided by this mezzanine. During the site visit it was filled to 80 percent capacity. During heavy rains, water has entered through a screen vent in the roof. Heavy plastic was used to divert the water and protect the collections.

Three unshaded, plate-glass windows are located on the north side of the office, at ground level, surrounding the exterior door. In addition, four doors are present in the ARS office—two hollow wood-panel interior doors (one leading to the rest room 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.

Environmental Controls

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

Pest Management

The exterior of the building is sprayed monthly by a contracted pest-management company. Additionally, rodent bait and ant stakes are used as a monitoring device on an as-needed basis. No signs of insects or rodents infestations were noted by the St. Louis District team during the site visit.

Security

Security consists of an intrusion alarm on the exterior of the building that is wired directly to the police department. Additionally, key locks are located on the front-entrance door and the loading-dock door of the ARS office. All professional staff members have key access to the office and the archeological collections. There is no public access to this facility. None of the windows can be opened.

Fire Detection and Suppression

The ARS office does not contain a fire-detection system. Four halon fire extinguishers, located throughout the office, constitute the only means of fire suppression present. A fire-safety inspection is conducted every six months.

Artifact Storage

Storage Units

Collections from Mare Island Naval Shipyard were stacked on the floor, under a table, in the first-floor office area for convenience during the evaluation.

Primary Containers

The primary container is a folded and glued, acidic-cardboard box with a telescoping lid. The box is labeled in marker on the exterior of the box. Label information consists of project name, site number, and box number. The box is covered with dust and dirt, and is compressed and torn.

Secondary Containers

Mare Island Naval Shipyard artifacts are stored in plastic, zip-lock bags (75%), paper bags (5%), and are also stored loose in the box (20%). Most plastic and paper bags have been labeled in marker; however, several have no labels.

Laboratory Processing and Labeling

Artifacts have not been adequately cleaned, labeled, or sorted. Secondary label information is inconsistent. Refer to Table 6 for a summary of material classes present.

Human Skeletal Remains

No human skeletal remains from Mare Island Naval Shipyard are being curated at ARS.

Records Storage

Associated documentation from Mare Island Naval Shipyard collections housed at ARS totals approximately 3.3 linear feet.

Paper Records

Paper records from Mare Island Naval Shipyard (2.3 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 one drawer of a legal-size file cabinet. Some paper records are stored in a three-ring binder. Filing-cabinet drawers have acidic-paper labels in metal holders. Drawers are labeled, in marker, with a description of the contents. Most documentation is kept in nonarchival file folders and acidic, accordion-type folders, but some material is loose within the primary container. Folders are labeled in pen, but label information is inconsistent. Neither the folders nor the paper documents are on acid-free stock. None of the paper records has been archivally organized, and contaminants such as staples were noted.

Photographic Records

Photographic records (< 1 linear foot) consist entirely of negatives. These are stored in long, folded, nonarchival sleeves. The sleeves are stored with paper records from Mare Island Naval Shipyard in a metal, legal-size, filing-cabinet drawer.

Maps and Oversized Documents

Maps and drawings (< 1 linear foot) associated with these collections are stored flat in a metal map-case drawer. Map drawers are labeled with acidic-paper labels in metal holders. Drawers are labeled in marker with the contents. These maps are old, blue-print copies of original maps that are on file at Mare Island Naval Shipyard. Maps have tears, and some are discolored and brittle. All maps are numbered in pencil.

Project Reports

Draft reports (< 1 linear foot) from archeological investigations at Mare Island Naval Shipyard are stored with the paper records.

Collections-Management Standards

Registration Procedures

Accession Files

Some accession files are present at ARS. A catalog and inventory is made for each collection as it is brought into the office.

Location Identification

A list of collections is maintained by ARS. The materials are 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 guide to the collections has been published.

Site-Record Administration

The California trinomial system is followed when possible.

Computerized Database Management

An in-house system on Microsoft Access and dBASEIV is used by the staff.

Written Policies and Procedures

Minimum Standards for Acceptance

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

Curation Policy

ARS does not have a written curation policy.

Records-Management Policy

There is no written records-management policy.

Field-Curation Procedures

There are no field-curation procedures. ARS does not accept outside collections for curation.

Loan Policy

There is no written policy regarding loaned material. Requests to borrow materials are evaluated by staff on a case-by-case basis.

Deaccessioning Policy

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

Inventory Policy

Each collection is inventoried when it is brought from the field, but ARS does not have a written inventory policy.

Latest Collection Inventory

The collection has never been inventoried.

Curation Personnel

ARS does not have a full-time curator. If curation is to be provided, it is written into the individual contract. Staff members working on each contract are responsible for curation at the level mandated in the contract.

Curation Financing

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

Access to Collections

Access to the collections by staff members is on an as-needed basis. No formal access policy has been established; researchers' written requests for access are considered on a case-by-case basis.

Future Plans

Future plans include installing additional shelving for artifact storage in the mezzanine and implementing a bar-code system for labeling artifact boxes. At the time of the assessment, the company was planning to move into a new facility. By the time this report had been published in mid-1997, the move had been accomplished.

Comments

1. The leaking roof above the mezzanine level is a threat to the collections.

2. Adequate humidity-monitoring and -controlling systems are not present.

3. An integrated pest-management system is not in place.

4. Since all staff members have access to the collections storage areas, security is compromised.

5. No fire-detection system exists, and the fire-suppression system is minimal.

6. Artifacts are not housed in acid-free containers.

7. Associated documentation is not housed in archival containers.

Recommendations

1. Remove and curate these collections in a facility with proper fire-detection and -suppression, environmental control, security, and pest-management systems.

2. Implement an integrated pest-management system, including monitoring and control on a regular basis.

3. Implement a proper security system, including an intrusion alarm in the collections storage area, and limit access to the collections.

4. Install a proper fire-detection and -suppression system, including a sprinkler system and smoke detectors wired into the fire department.

5. Monitor temperature and humidity and install a humidity-control device.

6. Rehabilitate and prepare artifacts for long-term storage according to federal guidelines and standards for modern curation. All artifacts should be labeled legibly with indelible ink; repackaged in 4-mil, polyethylene, zip-lock bags; and stored in acid-free boxes. A tag made from spun bonded paper (e.g., Nalgene polypaper) should be labeled in indelible ink and inserted into the plastic bags.

7. Institute an archives program immediately. Identify all associated records and prepare them for long-term storage according to federal guidelines and modern archival-preservation standards. Minimally, all paper records should be stored in acid-free folders; all photographic records should be identified and filed in inert, plastic sleeves or other approved archival-storage containers; and maps and oversized documents should be stored flat.

8. Duplicate all associated documentation, either on acid-free paper or on microfilm, and store the copies in a separate, fireproof, secure location.

9. A full-time curator for archeological collections should be hired.

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Basin Research Associates

San Leandro, California

Repository Summary

Volume of Artifact Collections: 1.5 ft^3

Collection Origin: NAS Moffett Field and MWTC Bridgeport

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

Linear Feet of Records: < 1 linear foot

Compliance Status: Associated documentation will require complete rehabilitation to comply with current federal guidelines and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: Curation activities are included as a line item in the contracted-project budget.

Date of Visit: March 1–2, 1994

Points of Contact: Donna Garaventa, research scientist; and Colin Busby, archeologist

Basin Research Associates, a cultural resources contracting firm, has conducted archeological investigations for NAS Moffett Field, OLF Crow's Landing, and MWTC Bridgeport, California. Basin Research Associates is currently curating approximately 1 ft^3 of archeological material and less than 1 linear foot of associated documentation from NAS Moffett Field. The firm is also curating 0.5 ft^3 of archeological material and less than 1 linear foot of associated documentation from MWTC Bridgeport. The entire NAS Moffett Field and NASA Ames Project collection consists of soil samples. Materials for the MWTC Bridgeport collection consist of soil samples (60%) and lithics (40%). Both collections are scheduled to be transferred to the Tiburon Archaeological Research Group (TARG) at San Francisco State University for permanent curation.

Assessment

Basin Research Associates has office, laboratory, and storage space in a one-story office complex (Figure 41) in the Catalina Business Park, San Leandro, California. The firm occupies 2,680 ft^2 within the complex, which was built in 1985 and houses various businesses. Activity areas within the company include offices, a large multipurpose room that has temporary artifact storage areas, an artifact-processing area, a laboratory, a records-storage area, a materials-and-supplies storage area, and a loading dock. Access to the loading dock is blocked at the present time by field equipment. Work areas are also filled with excess office equipment and numerous artifact boxes.

Figure 41. Basin Research Associates offices are located in this industrial complex.

Structural Adequacy

The office complex was constructed on a graded-concrete slab with prefabricated, poured-concrete, exterior walls. The built-up, asphalt roof is maintained and repaired each summer. Structure materials and design exceed the earthquake code in place at the time of construction. The structure is solid; no cracks or leakage were observed during the site visit.

Several windows are located in the offices at the front of the building, and one in the laboratory and storage area. Each window is 1.5 x 6 feet (w x h) and has venetian blinds. All windows have steel frames that show no sign of air or water leaks and are original to the structure.

Water for processing artifacts is available in the laboratory area. Rest rooms, telephones, and other utilities in the repository are original to the structure and are maintained on an as-needed basis. No evidence of water damage to either the building or the collections was noted by the St. Louis District team during the site visit.

Environmental Controls

Basin Research Associates has central-gas forced-heating and air-conditioning systems. Room temperatures generally are maintained at 68–70°F in the winter and 75°F in the summer. During high-wind rain storms, water enters through the air return vent and is funneled through a plastic sleeve into a bucket (Figure 42). Dust filters for the heating and air-conditioning systems are replaced monthly. Humidity levels are not monitored or controlled. The building is regularly maintained by office staff and a private company that is contracted by the owner of the property. Maintenance and cleaning are done weekly. No hazardous chemicals are stored or used in the laboratory. Therefore; no external ventilation is deemed necessary.

Pest Management

A contracted pest-management company is used for controlling insect and rodent infestations in the Basin Research Associates offices. According to staff members, the only problem they have experienced in the past is with ants, a problem that was eliminated by spraying with an insecticide. No signs of insect or rodent infestations were noted during the site visit.

Security

All exterior doors have key and dead-bolt locks, and windows are permanently sealed. Controlled access is maintained by the eight permanent

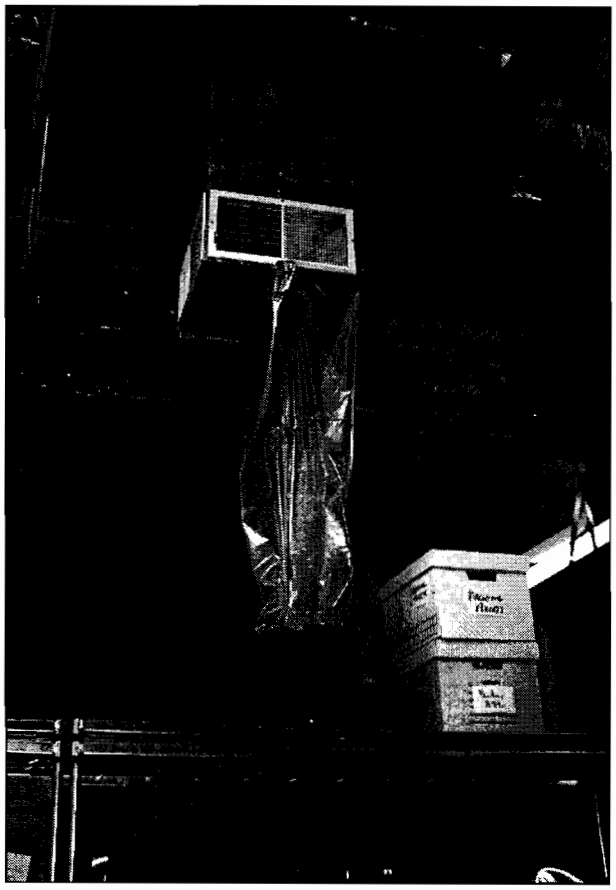

Figure 42. Condensation from the air conditioner at Basin Research Associates is funneled into a plastic bucket.

Figure 43. Adjustable shelving units are used for storing primary containers at Basin Research Associates.

employees who have keys labeled "Do Not Duplicate." Lights are left on in the building after hours, and the business complex is patrolled by city police throughout the night. No evidence of unauthorized entry was noted during the site visit; according to the staff there has not been an unauthorized entry in the past. Portions of the building's exterior walls bear graffiti.

Fire Detection and Suppression

There is no fire-detection system for the facility, and no sprinkler system for fire suppression. However, all of the doors in the facility met the requirements of the fire code in place at the time of the structure's construction, and fire extinguishers are located throughout the building. Extinguishers are inspected, and charged, by the fire department yearly.

Artifact Storage

Storage Units

Adjustable shelving units (Figure 43) used for storage of boxes are of various sizes, but are similar to each other. Each metal shelving unit, which has a baked-enamel finish, is approximately 3 x 7 x 2 feet (w x h x d). These units have either 5 or 6 shelves, none of which is labeled.

Primary Containers

Archeological materials are stored in long, shallow, 0.5-ft^3 acidic-cardboard boxes with telescoping lids. Box labels are written in black marker on pieces of acidic paper and are affixed to the boxes with cellophane tape.

Secondary Containers

Secondary containers for NAS Moffett Field and the NASA Ames Project are acidic-paper boxes with folding-flap lids and wire handles; they are similar to carry-out food containers. Secondary containers for the MWTC Bridgeport Project include the same wire-handled containers (60%) and 2-mil, zip-lock bags (40%) (Figure 44). Soil samples are stored in the boxes, and lithics are stored in the zip-lock bags. Information on secondary container labels is in black marker, and includes the site number(s), material class, and the types of associated documentation in the box.

Laboratory Processing and Labeling

None of the lithic debitage has been labeled directly, the only labels for the archeological collections are those that have been applied directly to the secondary containers.

Human Skeletal Remains

No human skeletal remains from naval shore facilities are curated by Basin Research Associates.

Records Storage

All associated documentation is stored in the box with the archeological collections. Records were stored with collections that were ready to be transferred to a permanent repository. Less than 1 linear foot of documentation from both NAS Moffett Field and MWTC Bridgeport is located at Basin Research Associates.

Paper Records

Paper records (approximately 2.5 linear inches) associated with NAS Moffett Field and the NASA Ames Project include original adminisrative correspondence, survey records, excavation records, photograph log sheets, and a final project report. All of the documentation is kept in one acidic, expandable envelope, which is not labeled. Documentation types are separated in the folder by three-ring-binder tab sheets with adhesive, acidic-paper labels written on in black ink. The report is stapled at one corner, and the associated documentation is held together with a metal clip.

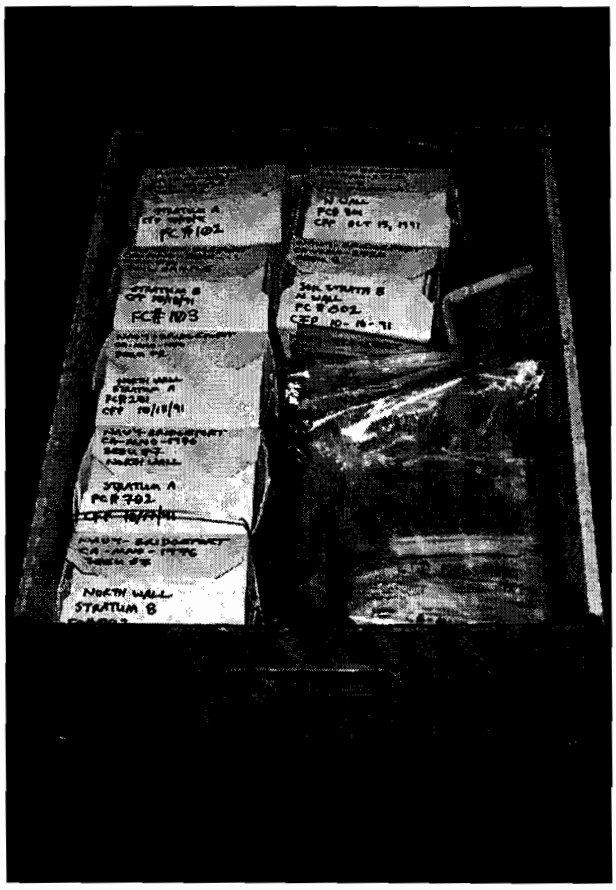

Figure 44. View of the primary and secondary containers that house MWTC Bridgeport collections at Basin Research Associates.

Paper records associated with the MWTC Bridgeport Project include field notes, administrative correspondence, catalog sheets, and photograph log sheets. The artifact inventory is computer-generated, while the rest of the paper records are on acidic paper that has been written on in pen or pencil. All records are in acidic-paper folders that are separated with metal clips.

Photographic Records

Photographic records associated with the NAS Moffett Field and the NASA Ames Project include black-and-white prints, color prints, negatives, and color slides. All prints are labeled either directly in black marker or with an black marker on adhesive labels. Prints and negatives

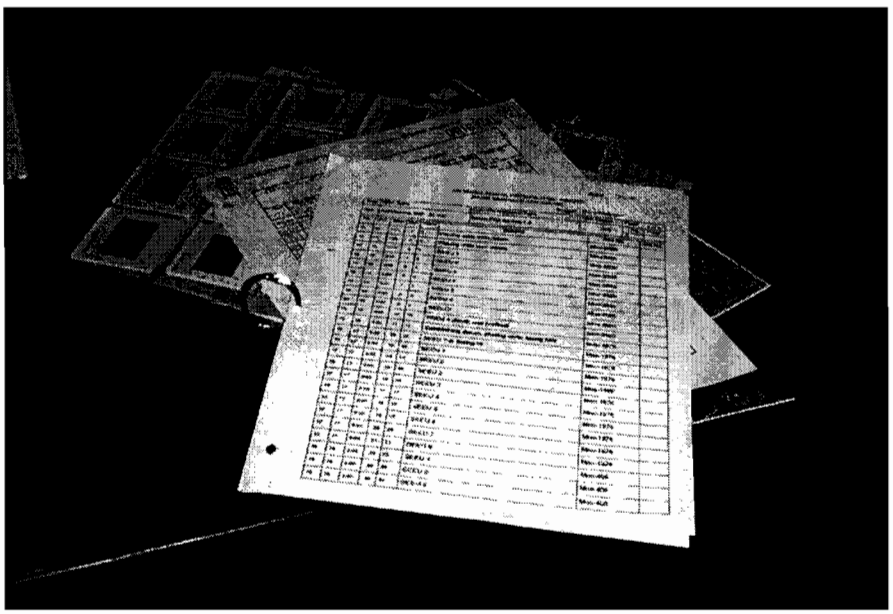

Figure 45. NAS Moffett Field color prints and slides are stored in archival-quality polypropylene sleeves.

are stored in a 2-mil, zip-lock bag. Color prints and slides are in polypropylene sleeves that are considered archival (Figure 45).

Photographic materials associated with the MWTC Bridgeport Project are stored in an acidic-paper folder. Materials present include originals and copies of photograph log sheets, slides, and black-and-white photographs. Original photograph log sheets are written in pen and pencil and stamped with blue ink. Information from these log sheets has been entered into a computer and printed out. Slides are labeled directly with black markers and stored in archival plastic sheets. Black-and-white photographs also are stored in plastic sheets that have adhesive labels. All photographic records are held together with a metal key ring to keep these records in order during analysis. The metal ring is removed prior to collection transfer to a permanent repository.

Project Reports

A final project report associated with NAS Moffett Field and the NASA Ames Project is kept in an acidic, expandable envelope with other paper records.

Collections-Management Standards

Registration Procedures

Accession Files

Basin Research Associates is not a permanent repository. Therefore, they do not view accessioning as an appropriate function.

Location Identification

Collection location is documented in office, working files.

Cross-Indexed Files

Office files are cross indexed by year and client.

Published Guide to Collections

No published guide to the collections exists.

Site-Record Administration

A trinomial site-numbering system is used.

Computerized Database Management

Computers are used to manage data associated with fieldwork and with collections. Individuals back-up their work on computer disks. The computer is attached to a network, which is backed

up weekly. A two-tape system is used for this backup; one is kept in the Basin Research Associates office, and the other is kept at the home of Colin Busby. All eight permanent employees have access to the network, with individual passwords, while temporary employees are given a restricted password when necessary. Individual passwords are changed at the discretion of the permanent employees.

Written Policies and Procedures

Minimum Standards for Acceptance

Basin Research Associates temporarily stores collections generated from their own contracted fieldwork until a permanent repository takes possession of the materials.

Curation Policy

Basin Research Associates follows the curation guidelines dictated by the repository where the collection is being sent.

Records-Management Policy

All associated documentation is photocopied before it is sent with the collection to a designated repository. Duplicates may or not be retained.

Field-Curation Procedures

Basin Research Associates has written field-curation guidelines.

Loan Policy

Collections are never loaned.

Deaccessioning Policy

Collections are not deaccessioned; they are transferred to permanent curation facilities.

Inventory Policy

A written inventory policy has not been drafted by Basin Research Associates. The company is responsible for preparing the initial inventory and for cataloging all materials prior to their transfer to a permanent repository.

Latest Collection Inventory

Basin Research Associates is responsible for the initial inventory of the collection. Staff are currently in the process of inventorying documentation. Material more than 5 or 10 years old is placed in long-term, off-site storage.

Curation Personnel

Curation personnel consist of Donna Garaventa, research scientist, and Colin Busby, archeologist. Both are responsible for collections processing, packaging, temporary storage, and transfer.

Curation Financing

Curation costs are included in each contract budget as a line item. Because curation costs are estimated before each project, Basin Research Associates plans to adopt a policy to allow adjustments in the size of the curation budget.

Access to Collections

Researchers and other interested parties are allowed access by appointment. All persons allowed access are supervised.

Future Plans

Basin Research Associates plans to expand their use of a computerized database-management system. They would also like a standardized, consistent catalog system and a standardization of curation materials. U.S. Navy collections temporarily stored at this facility are scheduled to be transferred to TARG at San Francisco State University.

Comments

1. Work and storage areas are cluttered and cramped.

2. Field equipment blocks the loading bay.

3. During high-wind rain storms, water enters through the air return vent and is funneled into a bucket that is on a shelf used to store archeological collections.

4. Humidity levels are not monitored or controlled.

5. No duplicates of photographic records have been made.

6. Not all photographic records are in archival polypropylene sleeves and acid-free binders.

Recommendations

1. Replace acidic-cardboard boxes with acid-free boxes. Apply adhesive, polypropylene or polyethylene label holders, with acid-free paper inserts to the boxes.

2. Replace secondary artifact containers with 4-mil, zip-lock, polyethylene bags and label these with indelible ink. Label inserts for secondary containers should be made from spun-bonded, polyethylene paper (e.g., Nalgene polypaper) and labeled with indelible ink.

3. Remove all contaminants (e.g., staples and paper clips) from associated documentation.

4. Duplicate all associated documentation on acid-free paper, and store the copies in a separate, fire-proof, secure location.

5. Paper records should be placed in acid-free folders and labeled with indelible ink.

6. Place all photographic materials in archival polypropylene sleeves, and place sleeves in acid-free, three-ring binders. Photograph log sheets should be duplicated on acid-free paper.

7. Photographic records should be stored in a stable environment that has temperature and humidity monitoring and controlling devices.

8. Develop and implement an emergency-management plan.

9. Install and implement appropriate fire-detection and -suppression systems.

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California State University

Los Angeles

Repository Summary

Volume of Artifact Collections: 201 ft^3

Collection Origin: OLF San Nicolas Island
Compliance Status: Collections will require complete rehabilitation to comply with existing federal guidelines and standards for curation.

Linear Feet of Records: 5.3 linear feet
Compliance Status: Existing associated documentation will require archival rehabilitation to comply with current federal guidelines and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: Curation activities are financed through the university and the Anthropology Department budgets

Date of Visit: November 2, 1993

Point of Contact: Patricia Martz, professor of anthropology

Dr. Martz, of CSULA, has conducted several field schools on San Nicolas Island for anthropology and archeology classes. These classes have done surveys and excavations at several sites with the permission of the U.S. Navy. Several of her students have conducted archeological research on the island in pursuit of M.A. and Ph.D. degrees. Those collections currently in the process of cleaning, stabilization, sorting, cataloging, or analysis are stored at CSULA. Upon completion of these tasks, the material is returned to San Nicolas Island. At the time of the assessment, 201 ft^3 of archeological materials and 5.3 linear feet of associated documentation were stored in three rooms (Collections Storage Areas 1–3) in Martin Luther King, Jr., Memorial Hall (MLK Hall) on the university campus.

Assessment

MLK Hall (Figure 46) is a 302,000-ft^2 concrete building with many departments sharing space within it. The Anthropology Department and collections storage areas are located on the third floor.

Structural Adequacy

MLK Hall was constructed in 1947. It has a concrete foundation and poured-concrete exterior walls. The built-up asphalt roof has been repaired on an as-needed basis. There are a total of six floors; one below ground and five above ground. Utilities present in the building include

Figure 46. The CSULA Anthropology Department is located in MLK Hall.

electricity, heating and air-conditioning systems, running water, rest rooms, telephones, and computer lines. Utility systems have all been renovated within the last 10 years. No overhead pipes are present in the collections storage areas.

At the time of the assessment, three rooms on the third floor were being used for the storage of collections. All of these rooms have concrete floors covered with tile; reinforced-plasterboard interior walls; and dropped, acoustical-tile ceilings. There are many 4-x-5-foot windows located on all sides of the building. There are also a number of wood-panel, hollow-core, interior and exterior doors in the collections storage areas that either connect classrooms or lead to a central hallway.

Environmental Controls

Central heating and air-conditioning systems are the only environmental controls present in the structure, including the collections storage areas. Dust filters are located on the air vents. The targeted temperatures range is approximately 70–78°F. These systems are monitored and controlled by CSULA Facilities Operations staff. The structure does not have an HVAC system. Humidity levels are neither monitored nor controlled. All utility pipes are found in hallway ceilings; none is present in collections storage areas. Light sources for the structure include nonfiltered fluorescent tubes and natural light. There are metal venetian blinds on all the windows. University janitorial staff clean the rooms daily.

Pest Management

A university-wide pest-management program monitors and controls any pest-infestation problems. Precautions against infestation are taken on an as-needed basis. The St. Louis District team saw at least one cockroach in the records storage area.

Security

Security measures for MLK Hall include key locks on all interior and exterior doors. Campus security patrol the grounds on a 24-hour basis. Dr. Martz is responsible for the collections; she supervises and controls access to them. An additional security measure is present for Collections Storage Area 3: a key lock and a push-button, combination, dead-bolt lock on the only door that opens to the central hallway. Windows have latch locks.

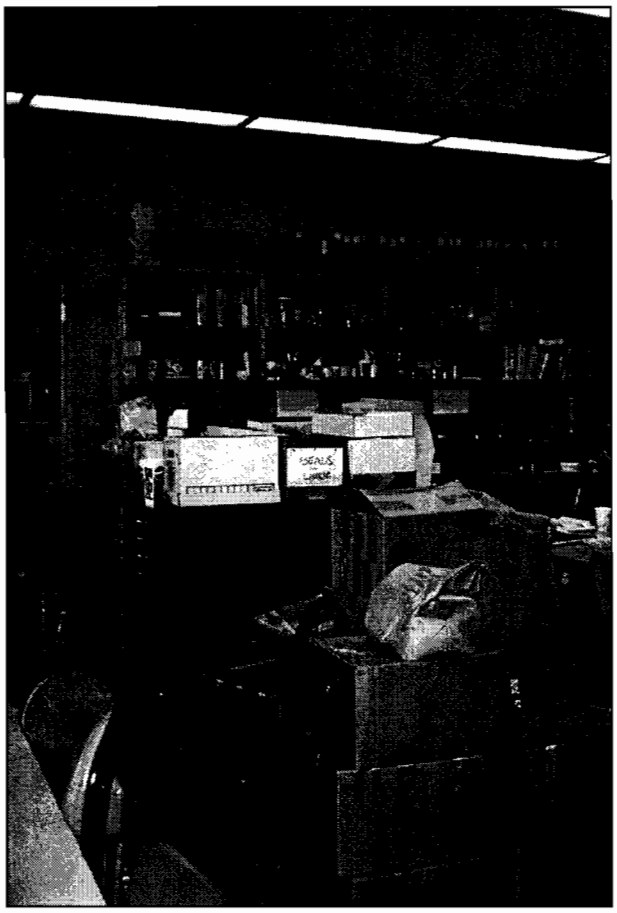

Figure 47. View of Collections Storage Area 1, Room D3069 in MLK Hall.

Fire Detection and Suppression

Fire-detection systems in MLK Hall consist of manual fire alarms wired directly to the fire department. The fire-suppression system present in the building includes many fire extinguishers; however, there are no fire extinguishers in any of the collections storage areas. MLK Hall does not have a sprinkler system, smoke detectors, or heat sensors.

Artifact Storage

Archeological collections and associated documentation are stored in separate rooms. Collections Storage Area 1 is a 1,000-ft^2 room that serves as a collections storage area, a laboratory, and a classroom (Figure 47). Within this room, students sort, classify, label, and analyze the 99 ft^3 of materials excavated from sites on OLF San Nicolas Island. An office within this room is where most of the associated documentation is stored. Collections Storage Area 2 (Figure 48) is a small, locked room adjacent to Collections Storage Area 1, where 27 ft^3 of special artifacts are kept. Collections Storage Area 3 (Figure 49) is an approximately 140-ft^2 room down the hall from Collections Storage Areas 1 and 2. This room was recently obtained to use for the

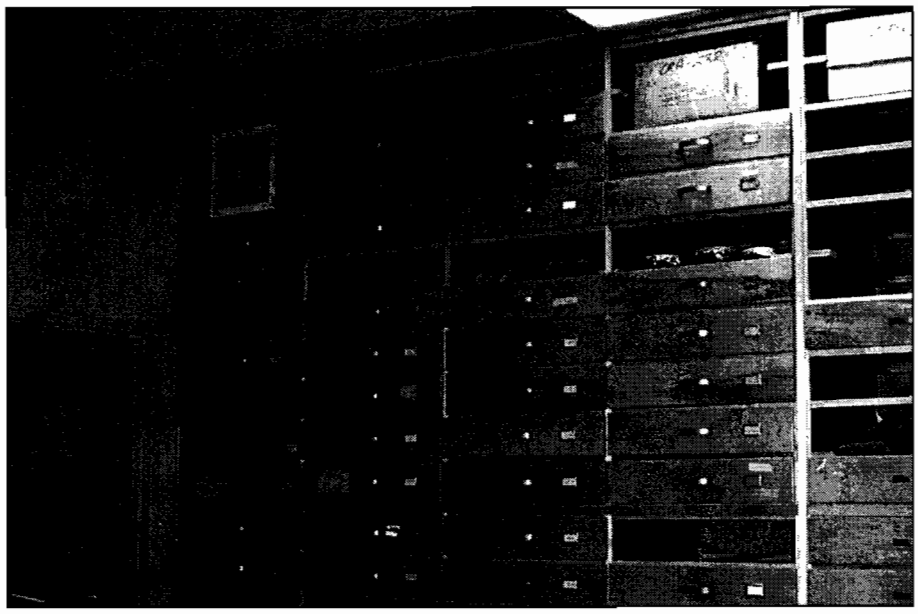

Figure 48. View of Collections Storage Area 2 in Room D3070 in MLK Hall.

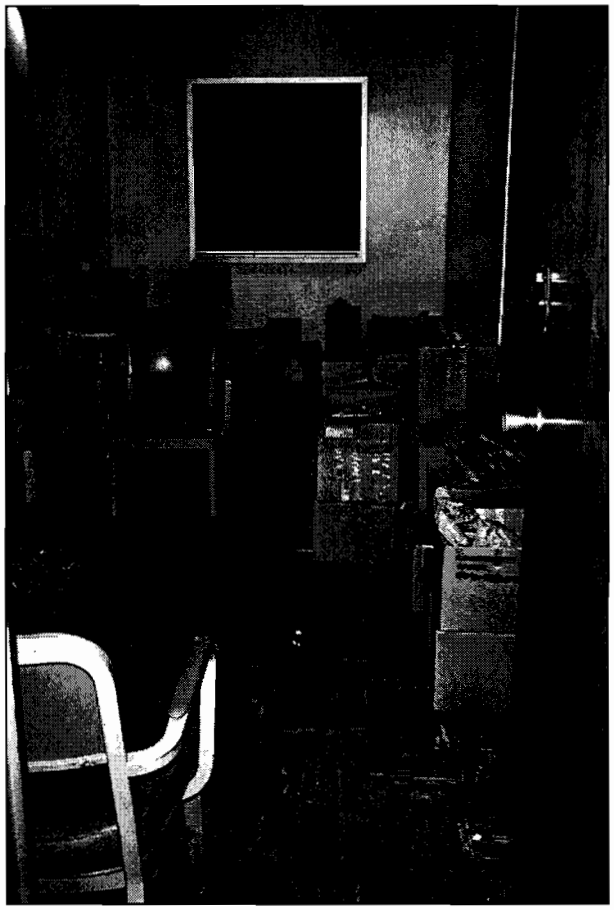

Figure 49. View of Collections Storage Area 3 in MLK Hall.

storage of an additional 75 ft^3 of archeological material.

Storage Units

Several types of storage units are used in Collections Storage Area 1. Material that the students are currently sorting and labeling is on plastic trays placed on work tables. Every available surface is used for the storage of the 99 ft^3 of OLF San Nicolas Island archeological materials located here, including various metal shelving units, floors beneath work areas, the top of the map case, and work tables (see Figure 47). Storage units in Collections Storage Area 2 are wooden shelving units with sliding wooden drawers (see Figure 48). At the time of the assessment, 75 ft^3 of material was sitting on the floor in Collections Storage Area 3 (see Figure 49).

Primary Containers

Primary containers differ significantly among the collections storage areas; however, acidic-cardboard boxes predominate (Figure 50). Primary containers are rapidly deteriorating from being over packed and stacked. Refer to Table 7 for a summary of primary containers by collections storage area and for the entire repository.

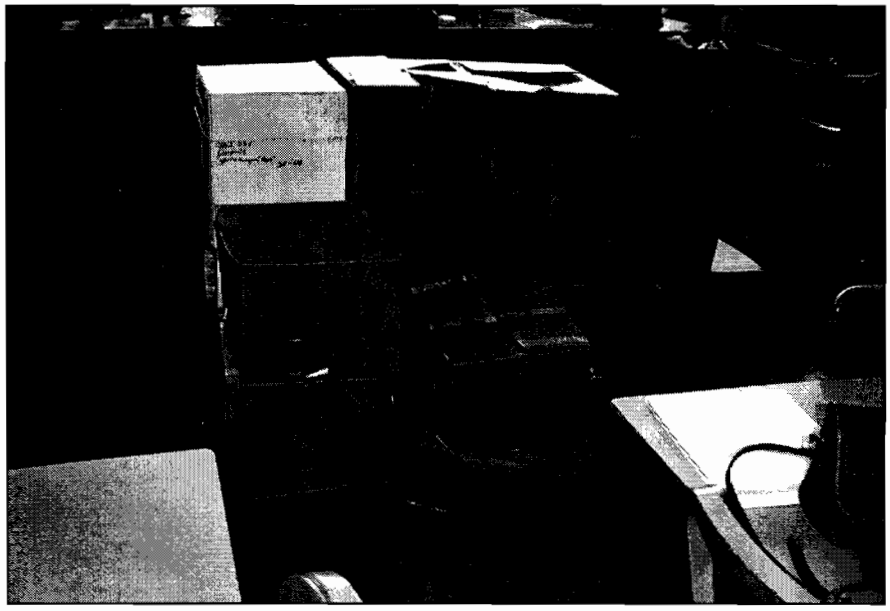

Figure 50. The predominant type of primary containers at CSULA are acidic-cardboard boxes, which are rapidly deteriorating.

Table 7. Summary of Primary Containers Present at CSULA, by Percentage

Primary Container	Collections Storage Area 1 (%)	Collections Storage Area 2 (%)	Collections Storage Area 3 (%)	Total (%)
Wooden drawers	—	88	—	29
Plastic trays	7	4	—	4
Cardboard boxes	79	—	100	60
Plastic bags	7	—	—	2
Paper bags	7	—	—	2
Loose materials	—	8	—	3
Total	100	100	100	100

Note: Percentages based on total ft^3 of materials in the collection.

Table 8. Summary of Secondary Containers Present at CSULA, by Percentage

Secondary Container	Collections Storage Area 1 (%)	Collections Storage Area 2 (%)	Collections Storage Area 3 (%)	Total (%)
Plastic bags	80	11	53	48
Paper bags	5	1	32	13
Loose material	10	57	15	27
Other[a]	5	31	—	12
Total	100	100	100	100

Note: Percentages based on total ft^3 of materials in the collection.
[a] "Other" includes acidic-cardboard trays and boxes, plastic film canisters, foil, metal canisters, and plastic baskets.

Inconsistent labels were found on primary containers in Collections Storage Area 1. Labels, if present, were written directly on the acidic-cardboard boxes and paper bags.

In Collections Storage Area 2, there was no consistent method of labeling the primary container. When labels were present on the wooden drawers, they were a combination of either 3-x-5-inch acidic-paper cards written on in marker, adhesive-paper labels written on in pen, acidic pieces of paper taped to the drawer and written on in pen, or acidic slips of paper written on in marker or pen and inserted in metal label holders on the drawers.

Primary container labels in Collections Storage Area 3 consist of black marker directly on the acidic-cardboard boxes.

Secondary Containers

There are four general categories of secondary containers in the three collections storage areas—plastic bags, paper bags, material loose in drawers, and other (Table 8 and Figure 51).

Most of the secondary containers in Collections Storage Area 1 have labels written directly on the container in marker or have acidic pieces of paper taped to the container. Some of the secondary containers in the classroom were not labeled.

Labels on secondary containers in Collections Storage Area 2 are either written directly on the container in marker, paper tags written on in ink and taped to the container, adhesive-paper tags written on in marker, paper slips written on in ink inserted in the container, or nonexistent.

Figure 51. Illustration of types of secondary containers—plastic vials, plastic bags, aluminum foil, and cardboard boxes—at CSULA.

Table 9.
Summary of Material Classes Present in the OLF San Nicolas Island Collections at CSULA, by Percentage

Material Class	Collections Storage Area 1 (%)	Collections Storage Area 2 (%)	Collections Storage Area 3 (%)	Total (%)
Lithics	20	68	19	36
Shell	47	12	25	28
Botanical	1	—	5	2
Soil	1	1	7	3
^{14}C	1	1	1	1
Other[a]	30	18	43	30
Total	100	100	100	100

Note: Percentages based on total ft^3 of materials in the collection.
[a] "Other" includes faunal bone tools, asphaltum, column samples, basketry impressions, and fossils.

Labels on secondary containers in Collections Storage Area 3 are written directly on the containers in marker.

Laboratory Processing and Labeling

Of all the materials stored in three collections storage areas in MLK Hall, 83 percent of the material has been cleaned and placed in the secondary containers listed above. Only 51 percent of the material has been labeled. The objects that are labeled with their accession numbers written directly on them in ink, without a protective coating, were accessioned in the 1980s. Approximately 17 percent of the labeled materials also have paper tags written on in ink. All of the objects labeled by the field school students working on OLF San Nicolas Island have a protective coating. Refer to Table 9 for a summary of material classes present.

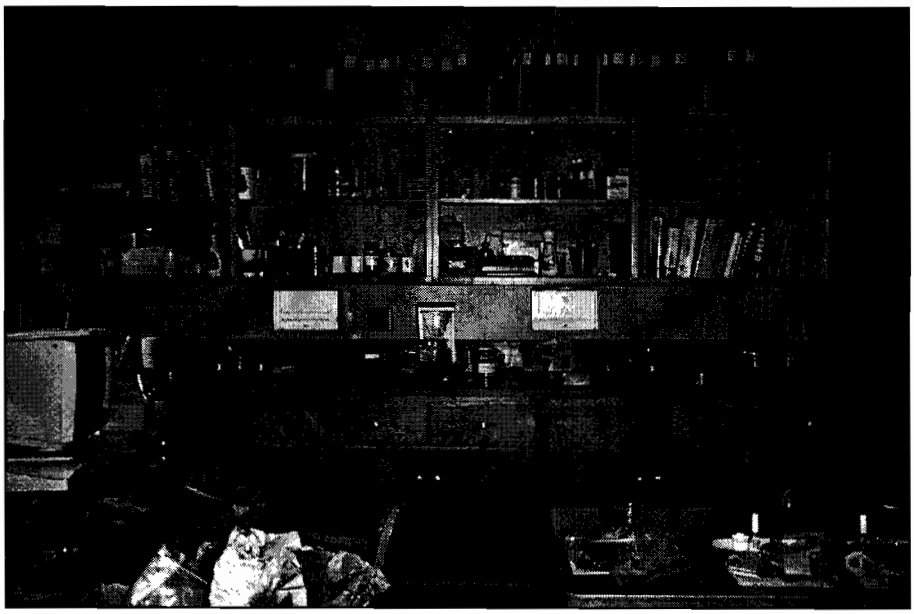

Figure 52. Associated records are stored in a portion of Collections Storage Area 1.

Human Skeletal Remains

No human skeletal remains from naval shore installations are being curated in this facility.

Records Storage

Most of the associated documentation, other than that currently being used by students, is kept in Collections Storage Area 1 (Figure 52). A total of 5.3 linear feet of associated documentation, including photographs and negatives, artifact cards, catalog sheets, level forms, field forms, reports, and slides is kept on the shelves in her office. Some of the photograph log sheets and other forms are kept on a shelf over the sink in the classroom.

The documentation is accounted for and readily accessed. It is arranged by site number. There is a lack of storage space within Collections Storage Area 1. Duplicates of associated documentation have not been made. A sign-out book is used when students or researchers borrow any records.

Paper Records

One linear foot of paper records is kept in acidic-paper folders and envelopes that are stored on shelves in Collections Storage Area 1. Contaminants such as noncoated metal binders and paper clips are present. An additional 2.5 inches of acidic-paper artifact cards are stored in wooden drawers with artifacts in Collections Storage Area 2.

Photographic Records

Two linear feet of photographic records, including black-and-white photographs, negatives, and color photographs, are kept in nonarchival three-ring binders and paper envelopes. The materials are stored on a shelf in Collections Storage Area 1 and on top of cabinets over the sink in the main classroom and laboratory area.

Maps and Oversized Documents

A flat map case located in Collections Storage Area 1 has approximately 7 inches of oversized maps of OLF San Nicolas Island. The map case is metal, and has metal label holders with acidic-paper inserts.

Reports

Approximately 1.5 linear feet of reports associated with OLF San Nicolas Island are shelved in Collections Storage Area 1. All are bound with and stored with nonarchival materials.

Machine-Readable Records

Computer discs are kept in a diskette file at Computer Work Station A in Collections Storage Area 1. These contain the catalogs and database files for SNI-351, -161, and the surface collections.

Collections-Management Standards

Registration Procedures

Accession Files

Accession files are not kept for the artifacts.

Location Identification

Their is no written record giving the location of the archeological materials.

Cross-Indexed Files

Records are not cross-indexed.

Published Guide to Collections

No guide to the collections has been published.

Site-Record Administration

A trinomial site-numbering system is used.

Computerized Database Management

A computerized database system is not used to manage the collections.

Written Policies and Procedures

Minimum Standards for Acceptance

There are no written minimum standards for the acceptance of material.

Curation Policy

There is not a written curation policy.

Records-Management Policy

There is not a written records-management policy. All of the associated documentation is arranged at the discretion of Dr. Martz.

Field Curation Procedures

The university has a written manual for research done on OLF San Nicolas Island.

Loan Policy

There is a loan-agreement form, and an inventory of the material being loaned is provided.

Deaccessioning Policy

There is no written deaccessioning policy.

Inventory Policy

Dr. Martz keeps a written list of all the objects' accession numbers.

Latest Collection Inventory

There has never been a complete inventory of the archeological materials. An ongoing list of accession numbers is kept.

Curation Personnel

Dr. Martz is responsible for the collections being curated at the university. She also has the responsibility of supervising her students' work on current archeological materials from OLF San Nicolas Island.

Curation Financing

Curation activities are financed through the university and Anthropology Department budgets.

Access to Collections

Dr. Martz allows her students and legitimate researchers access to the collections. All parties must have permission to work with the collections and must set up appointments with her.

Future Plans

Dr. Martz is working on obtaining additional storage space and more shelving units to accommodate the archeological materials she is responsible for.

Comments

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

2. Light sources do not have ultraviolet filters.

3. There is a lack of fire-detection and -suppression systems.

4. The facility does not have an adequate pest-management program. The assessment team noted a cockroach in the records storage area.

5. Collections storage areas are overcrowded and cluttered.

6. Many recommended policies and procedures for the management of archeological collections and records are not in place.

7. None of the associated documentation has been duplicated, with the exception that there are copies of some reports.

8. Nonarchival materials are used for the storage of both artifacts and records.

9. Collections have not been labeled consistently.

10. Primary containers for artifact collections have significant damage due to overpacking boxes and stacking them on top of each other.

Recommendations

1. Install a humidity-monitoring and -control system that functions in all rooms where collections and records are stored.

2. Place ultraviolet filters on all light sources, including windows.

3. Implement a comprehensive pest-management program that integrates consistent monitoring and control methods.

4. Install an appropriate fire-detection and -suppression system.

5. Provide more dedicated space for collections and records storage.

6. Replace acidic-paper bags, plastic grocery bags, and acidic-cardboard boxes with acid-free boxes. Apply adhesive, polyethylene label holders with acid-free inserts to the boxes. Labels should no longer be applied directly to the boxes. When label information or box contents change, inserts can be replaced, thus reducing the chance for conflicting and confusing information.

7. Place primary containers on secure, enameled-metal shelving units.

8. Replace secondary containers with 4-mil, zip-lock, polyethylene bags and label with indelible ink. Labels for secondary containers should be made from spun-bonded, polyethylene paper (e.g., Nalgene polypaper) labeled in indelible ink and inserted into the secondary containers.

9. Label all artifacts with indelible ink to prevent information loss if artifacts are separated from provenience information.

10. Duplicate all paper records onto acid-free paper, and place in acid-free folders labeled in indelible ink. Place all folders in acid-free, cardboard boxes, and apply adhesive, polyethylene label holders with acid-free inserts to the boxes. Store these copies in a separate, fire-proof, secure location.

11. Arrange associated documentation according to modern archival procedures and create a finding aid for the documentation collection.

12. Remove all contaminants (e.g., staples, paper clips, and rubber bands) from original documentation.

13. Place all photographic materials in archival, polypropylene sleeves, and place sleeves in acid-free, three-ring binders. Photograph logs should be on acid-free paper in indelible ink.

14. Photographic records should be stored in a stable environment that has humidity- and temperature-monitoring and -control devices.

15. Use a computerized database system to manage collections and associated documentation.

16. Complete an inventory of all collections.

17. Develop and implement minimum standards for acceptance, a curation policy, a records-management policy, a deaccessioning policy, and an inventory policy.

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Carpinteria Valley Museum of History

Carpinteria, California

Repository Summary

Volume of Artifact Collections: 1 ft^3

Collection Origin: OLF San Nicolas Island and San Miguel Island

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

Linear Feet of Records: < 1 linear foot

Compliance Status: All associated documentation will require complete rehabilitation to comply with current federal guidelines and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: Annual funding is accomplished through fund-raisers and grants.

Date of Visit: December 8, 1993

Point of Contact: David Griggs, director and curator

Approximately 1 ft^3 of artifacts from San Nicolas and San Miguel Islands and less than 1 linear foot of associated documentation are stored at CVMH. The facility is a small community museum with permanent exhibit space mainly for historical-period collections related to the region's past.

Collections from San Nicolas and San Miguel Islands were donated to CVMH in 1961 by Mr. Rock, a local rancher, who obtained these collections in 1929 from A. R. Sanger. According to Rock's notes of 1930, which are on file at CVMH, Sanger collected these materials ca. 1916. Research conducted by Griggs has suggested that these artifacts were collected prior to Navy ownership of the islands.

Assessment

CVMH is a concrete-block structure constructed to look as if it were adobe (Figure 53). Built as a single-story structure in 1969, the building gained additional exhibit and storage space in 1985 with the construction of a second-story wing (Figure 54).

Structural Adequacy

CVMH has a concrete foundation. The plaster-covered, concrete-block exterior and tiled roof give CVMH an adobelike appearance. Activity areas in CVMH include space for exhibits, offices, and collections storage. A portion of the artifact collections and records are stored on the second floor of the new wing. The 400-ft^2 collections storage area has a wooden floor and

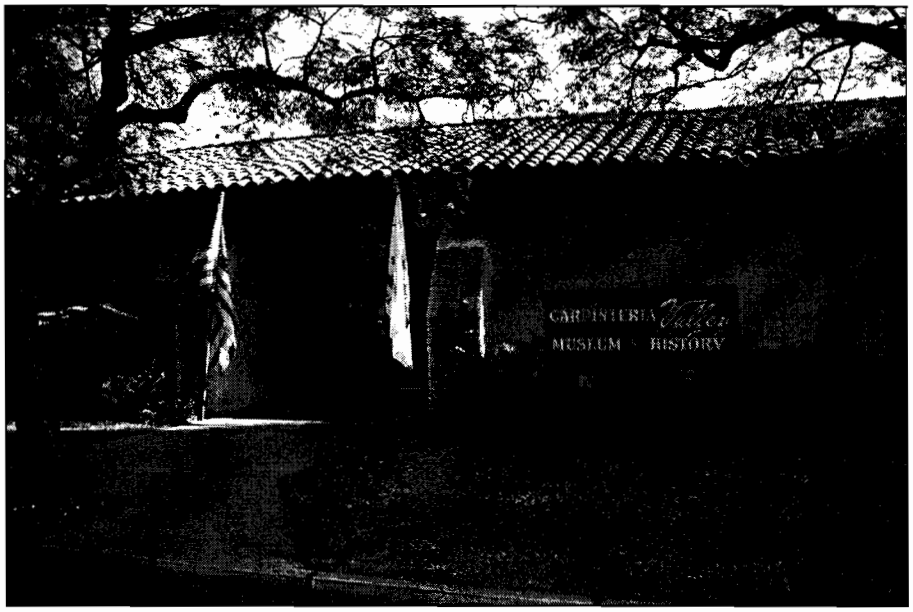

Figure 53. Exterior view of the main structure that houses the CVMH.

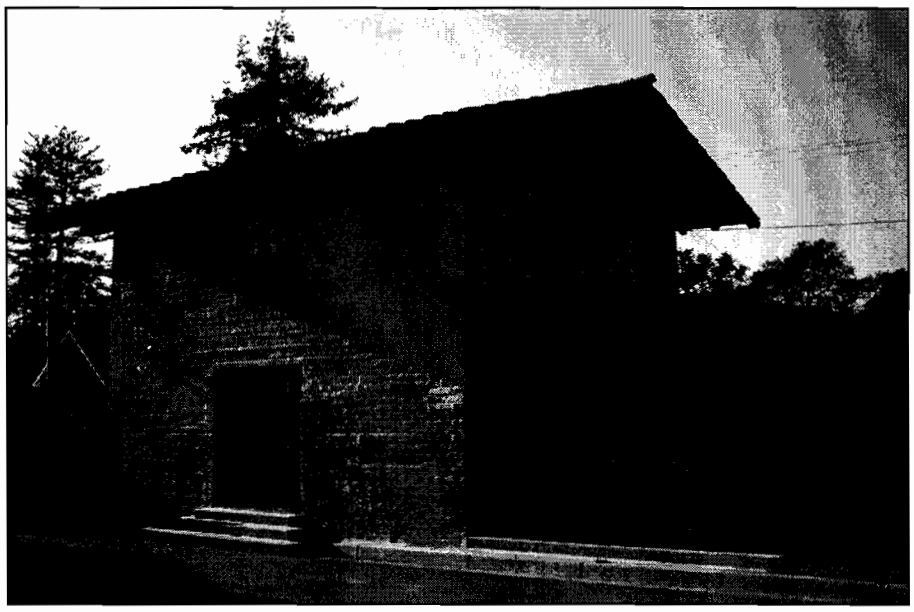

Figure 54. Exterior view of the 1985 two-story addition to the CVMH.

ceiling, with brick interior walls. Within the collections storage area there is a shaded, wood-framed window. All of the structure's windows are of the same construction.

Environmental Controls

CVMH has central, gas, forced-air heat. Targeted temperatures are between 60 and 70°F. Humidity is not controlled, but a hygrometer monitors the fluctuations. A broken hygrothermograph is located in the collections storage area. Lighting in the collections storage area is provided by desk lamps and fluorescent lights with ultraviolet filters. Maintenance is provided weekly by volunteer staff.

Pest Management

Precautions taken against pests include a routine inspection of the facility as well as the use of a fumigation cabinet or freezer for decontaminating materials. Antisilverfish packets have been placed in strategic locations. Pests have not been a problem since the facility was fumigated eight years ago.

Security

Security for the facility is provided by 24-hour guards. Controlled access and the use of key locks provide additional security for the collections storage area. Two wood-panel doors must be passed in order to reach the collections storage room on the second floor. All windows on the exterior of the building have wrought-iron security bars.

The exhibited materials are shown in two wood-framed, glass cases. Lighting in the display unit has ultraviolet filters. Each display unit contains wooden shelving. One shelf has been painted, and the other has been wrapped in burlap. Security for the display units is provided through limited access to the collections. Entrance to the display units is obtained by unscrewing their back panels.

Fire Detection and Suppression

A sprinkler system is present throughout CVMH. A fire alarm is present within the building; the alarm has not been wired into the local fire department due to the short distance between CVMH and the fire department, which is located behind the museum. CVMH is well within hearing distance of the fire department. Fire extinguishers are located throughout the building. Both collections storage areas have ready access to fire extinguishers.

Artifact Storage

Artifacts are stored in two separate rooms. Artifacts on exhibit (75% bone tools and 25% lithics) are stored in two display units on the first floor, in the original exhibit area of the museum (Figure 55). Artifacts (90% bone tools and 10% lithics) also are stored in an acidic-cardboard box (Figure 56) in a collections storage room located on the second-floor portion of the new wing.

Storage Units

In Collections Storage Area 1, the majority of the artifacts are currently stored under a table on the floor of the second-story collections storage room.

In Collections Storage Area 2, the original exhibit area of CVMH, some of the collections are on exhibit in two glass exhibit cases on the first floor. They both contain ultraviolet-filtered lights. The cases are secured with screwed-on rear panels. The artifacts are on wooden mounts within the exhibit cases.

Primary Containers

One nonlabeled, acidic-cardboard box with a telescoping lid serves as the primary container for the collection stored in Collections Storage Area 1 (see Figure 56). No primary containers are present for the collections being exhibited in Collections Storage Area 2.

Secondary Containers

An acid-free archival box is used to store bone artifacts in Collections Storage Area 1, on the

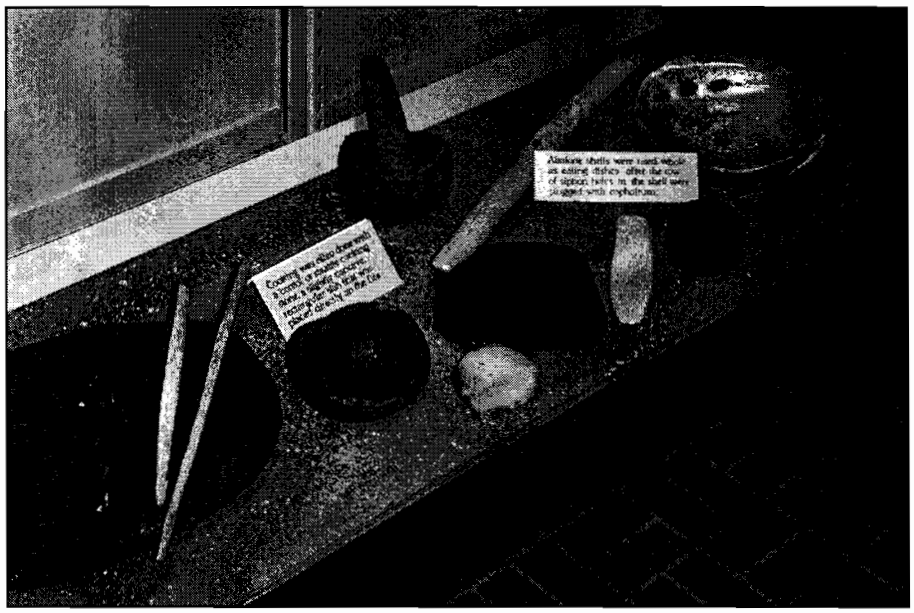

Figure 55. San Nicolas and San Miguel Islands artifacts on display at the CVMH.

Figure 56. Artifacts from San Nicolas and San Miguel Islands are also housed in one acidic-cardboard box at CVMH.

second floor of the new wing. The items on exhibit in Collections Storage Area 2 are, of course, not in secondary containers.

Laboratory Processing and Labeling

Artifacts were all cleaned and then labeled directly in permanent ink with a clear protective coating. Several of the artifacts have their original 1930 gummed labels affixed.

Human Skeletal Remains

No human skeletal remains are being curated at CVMH.

Records Storage

The only associated documentation assessed for this collection were copies of the original accession records that were being used in the inventory and recataloging of the collection.

Paper Records

The only paper records observed consisted of a recent inventory list on acidic notebook paper. The original 1961 accession records and 1930 notes on the collections were not observed at the time of the assessment, but are said to be on file at CVMH.

Photographic Records

No photographic records associated with this collection are being stored at CVMH.

Maps and Oversized Documents

No maps or oversized documents associated with this collection are housed at CVMH.

Reports

No project reports associated with this collection are being stored at CVMH.

Collections-Management Standards

Registration Procedures

Accession Files

Artifacts are accessioned upon receipt.

Location Identification

Physical locations of the artifacts are not identified within the accession file.

Cross-Indexed Files

Files are cross-indexed by donor and accession number.

Published Guide to Collections

No guide to the collection has been published.

Site-Record Administration

No system of site-record administration is in place.

Computerized Database Management

No computerized database management system is employed.

Written Policies and Procedures

Minimum Standards for Acceptance

The museum only accepts objects collected in the region.

Curation Policy

Curation policies are present in the CVMH volunteer handbook. Docents are knowledgeable about these policies. Formal curation policies are also kept on file with the business files of CVMH.

Records-Management Policy

Records-management policies are outlined in the CVMH volunteer handbook.

Field-Curation Procedures

There are no field-curation procedures. Archeological collections are no longer accepted.

Loan Policy

Loan procedures are in place, but loaning is uncommon.

Deaccessioning Policy

A deaccessioning policy is in place. However, archeological materials are never deaccessioned.

Inventory Policy

No formal inventory policy exists.

Latest Collection Inventory

The collection was inventoried just prior to the site visit.

Curation Personnel

David Griggs is the director and only full-time curator. CVMH relies heavily on volunteer efforts.

Curation Financing

Curation is financed through fund-raising activities, grants from private foundations, membership fees, and budgeted funds.

Access to Collections

Collections are accessible to anyone approved by Griggs. Supervision and an appointment are necessary.

Future Plans

Curation upgrading is currently in progress. New baked-enamel cabinets and other archival storage materials are being integrated. The collections from San Nicolas and San Miguel Islands are being inventoried and rehoused in the new museum cabinets.

Comments

1. The artifacts are readily accessible.

2. Fire-detection and -suppression systems are adequate.

3. Humidity levels are not monitored or controlled in the collections storage areas.

4. Management policies and procedures are not all documented.

5. Artifacts and associated documentation are not stored in environmentally stable conditions.

Recommendations

1. Utilize sticky traps and rodent traps to provide better monitoring of pest infestations.

2. Create a written inventory policy which outlines a periodic inventory of the collection. A yearly inventory is adequate.

3. Install an HVAC system to monitor and control temperature and humidity. Install a dust-filtration system throughout the collections storage areas.

4. Purchase a hygrothermograph to replace the broken unit.

5. Document all informal policies and procedures.

6. Duplicate all associated records onto acid-free paper and place them acid-free folders stored in acid-free boxes. Duplicates should be stored in a separate, fire-proof, secure building:

7. Identify all recovered associated and unassociated funerary objects, sacred objects, and objects of cultural patrimony, as defined by NAGPRA, and determine their disposition.

8. Label primary containers using adhesive, polyethylene label holders with acid-free paper inserts.

9. Replace adhesive labels on artifacts with indelible ink labels written directly on a protective surface.

10. Develop an emergency-management plan.

11. Package loose materials in 4-mil, zip-lock, polyethylene bags. Label bags directly with indelible ink. Provide accession numbers.

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Channel Islands National Park Visitor Center

Ventura, California

Repository Summary

Volume of Artifact Collections: 4.1 ft^3

Collection Origin: San Miguel Island
Compliance Status: Collections will require partial rehabilitation to comply with existing federal guidelines and standards for curation.

Linear Feet of Records: 1.2 linear feet
Compliance Status: Documentation will require complete rehabilitation to comply with current federal guidelines and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: Curation activities are financed through the Resource Management yearly budget.

Date of Visit: December 9, 1993

Points of Contact: Don Morris, cultural resources director, and Kathleen Baldwin, museum technician

CINP, Ventura, California, is currently curating approximately 4.1 ft^3 of archeological materials from San Miguel Island. San Miguel Island is legally the property of the U.S. Navy, although the National Park Service (NPS) manages the island. The collection, which is stored in a small building (Repository 1) at the Visitor Center, is a reference collection. Additional archeological materials from San Miguel Island are curated at the NPS's Western Archeological Conservation Center, Tucson, Arizona. Approximately 1.2 linear feet of associated documentation from San Miguel Island is stored in a separate building (Repository 2) in Don Morris's office.

Assessment of Repository 1

Repository 1 is a single-story, one-room (136-ft^2) structure (Figure 57) located behind CINP. Approximately 95 ft^2 of this structure is used for the storage of prehistoric and historical-period artifacts. The structure stands on a wooden platform and is surrounded by a concrete wall.

Structural Adequacy

Repository 1 was constructed in the summer of 1991, by Bally Engineered Structures, specifically for the storage of archeological collections, and 95 ft^2 (~70%) of the structure is devoted to this purpose. The building is a prefabricated structure with composition asphalt siding over finished-metal exterior walls. The building has

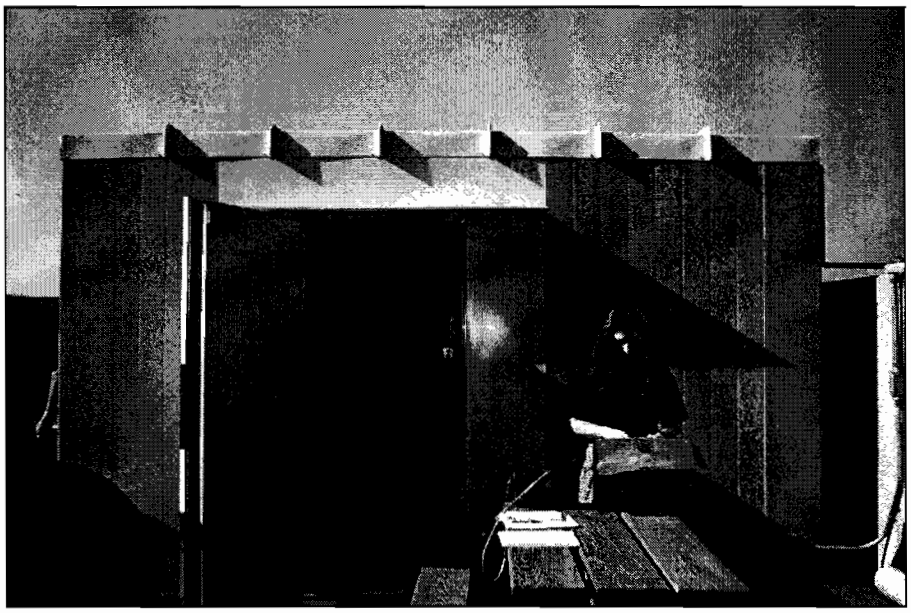

Figure 57. Exterior view of Repository 1 at CINP.

an insulated metal roof, a metal floor, and no windows. The single door is a hollow-core, metal-paneled fire door. The plumbing and electrical systems are original to the structure. A failure of the sprinkler system in September 1992 damaged some historical-period metal artifacts that were stored on open, metal shelving units. These non-Navy objects are currently at WACC undergoing conservation treatment.

Environmental Controls

Repository 1 is environmentally controlled by an HVAC system. The targeted humidity level, which is monitored by a hygrothermograph, is 45–50 percent, and temperature is maintained at 50–55°F. A portable electric heater is located against the wall near the exterior door. Dust filters on the HVAC system are changed by staff on an as-needed basis. Illumination is provided by fluorescent lights with ultraviolet filters. Repository 1 is cleaned twice a week by Baldwin.

Pest Management

An integrated pest-management system, which includes regular monitoring and control, is not in place in Repository 1. The program for pest management consists of regular monitoring and as-needed control procedures. Environmentally sound mouse traps and hanging sticky traps are used to monitor the area. No signs of rodent or insect infestation were observed by the St. Louis District team during the site visit.

Security

Repository 1 is surrounded by a concrete wall and a locked, wooden gate. An intrusion alarm is connected to the only door in the building and is monitored by a contracted security company. The door to the building is equipped with a deadbolt lock. Access is controlled by curatorial personnel. Outside researchers and other staff are allowed to study the collections only under the supervision of curatorial personnel.

Fire Detection and Suppression

Fire-detection devices present include a manual fire alarm on the exterior of the building, a smoke detector, and a heat sensor meant to trigger the sprinkler system, which is nonfunctional. The fire alarm is wired directly to the local fire department. There are no functional fire-suppression devices present.

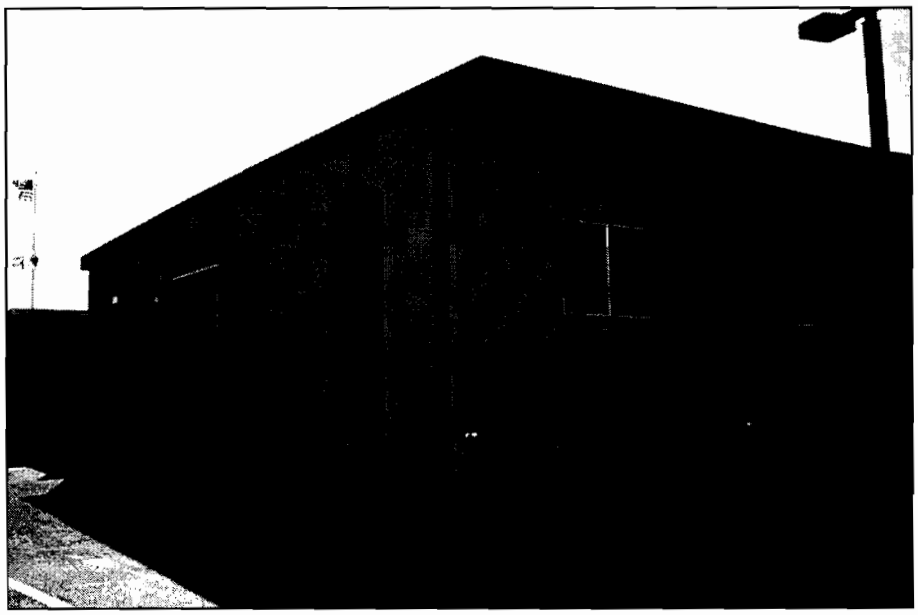

Figure 58. Exterior view of Repository 2 at CINP.

Artifact Storage

Storage Units

Approximately 4.1 ft^3 of archeological collections are stored in metal cabinets stacked on top of each other (Figure 58). Three of the 5 cabinets are 29 x 37 x 32 inches (w x h x d). The other 2 are each 28.25 x 40 x 38.5 inches. Each cabinet has gasket-sealed doors to protect its interior from water damage and pest infestation. They are labeled with adhesive-acidic paper, numbered in black marker.

Primary Containers

Primary containers are sliding, metal drawers lined with single sheets of polyethylene foam (Figure 59). Some of the drawers contain a desiccant to absorb moisture. In Cabinets 1–3, drawers are 25.5 x 30 x 1.75 inches (l x w x d). In Cabinets 4 and 5, drawers are 23.5 x 36.5 x 1.75 inches. The drawers containing San Miguel Island materials are not labeled.

Secondary Containers

A combination of 2- and 4-mil bags are used for 40 percent of the collections. The remaining artifacts are stored loose in drawers. Artifact bags are directly labeled with black marker. Individual

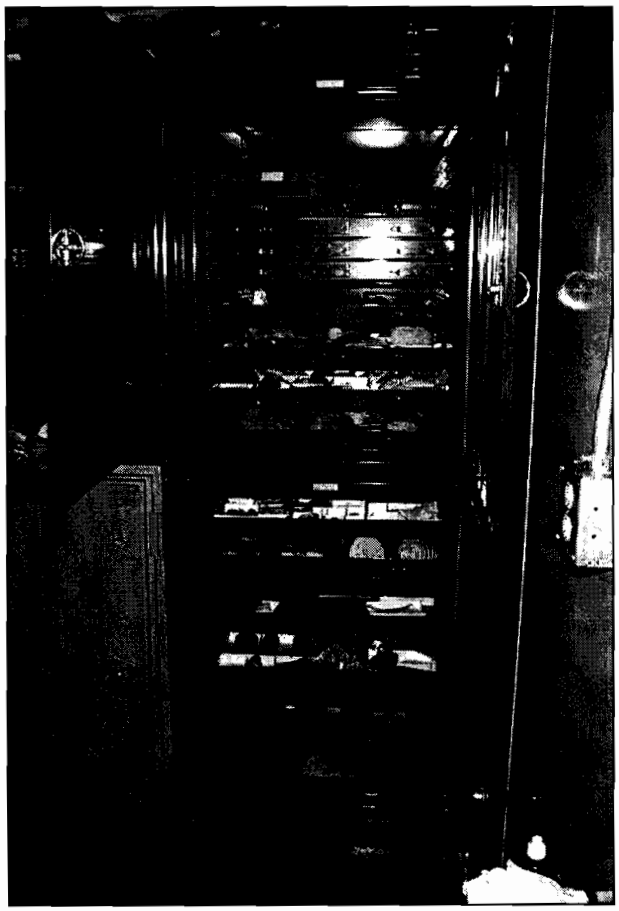

Figure 59. Storage units for archeological materials at CINP.

Table 10. Summary of Material Classes Present in the Navy Collections at CINP, by Percentage

Material Class	%
Prehistoric	
Lithics	38
Faunal remains	8
Shell	10
Botanical	10
^{14}C	1
Other[a]	7
Historical-period	
Ceramics	6
Glass	8
Metal	10
Textiles	1
Other[b]	1
Total	100

Note: Percentages based on total ft^3 of materials in the collections.
[a] "Other" includes asphaltum and fossils.
[b] "Other" includes lithics, plastic, and wood.

artifact labels on pieces of acidic paper are enclosed within the bags.

Laboratory Processing and Labeling

All of the San Miguel Island artifacts (Table 10) have been cleaned, labeled, and sorted by material class or artifact type. Eighty percent of the artifacts are labeled directly with either india ink on white paint or white ink directly on the artifact. A clear coating is used to seal both types of labels. Twenty percent of the artifacts have acidic-paper tag labels written on in pen or pencil. Label information includes some, but not always all, of the following: accession number, site number, and artifact description.

Human Skeletal Remains

No human skeletal remains from naval shore facilities are being curated at this repository.

Records Storage

No records associated with archeological materials from naval shore installations are housed in Repository 1. Refer to the assessment of Repository 2, below, for a discussion of records storage at CINP.

Assessment of Repository 2

Repository 2 (Figure 60) is a trailer used for office space. Associated documentation is kept in the office space of Don Morris, the cultural resources manager. The structure is a single-story, 1,250-ft^2 building located behind CINP.

Structural Adequacy

Repository 2 is 10 years old and is used to satisfy the need for additional office space. The cultural resources manager's office is approximately 100 ft^2. Fifty percent of this space is devoted to the storage of associated documentation.

The office building, which is approximately 1 foot above the ground, is a prefabricated wooden structure that has a metal-and-wood-supported foundation. The space between the foundation and the ground is concealed by wooden skirting that extends downward from the exterior walls. Minimal insulation has been placed in the walls and roof. The roof is constructed of wood and metal and is covered with composition, tar-and-gravel tiles. The floor is wood, covered with carpet. Interior walls are covered with a wood-panel veneer, and the ceiling in the structure is constructed of acoustical tiles. The plumbing and electrical systems are original to the structure.

There are 10 windows in Repository 2. Six of the windows—two on the northwest side, two on the southwest side, and two on the southeast side—measure 2.5 x 3 feet and are partially covered with venetian blinds. Four large windows on the northeast side of the building, two on each side of the entrance, measure 3 x 7 feet (w x h). The only exterior doors are the wood-and-glass doors on the northeast side. All of the window frames are aluminum and show no signs of air or water leakage.

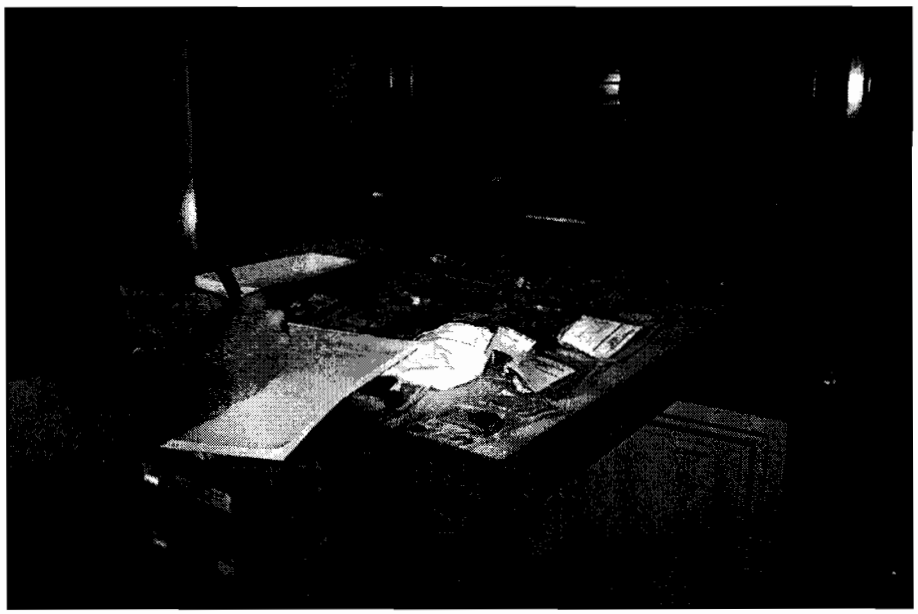

Figure 60. Primary containers consist of sliding metal drawers lined with polyethylene foam.

Environmental Controls

Repository 2 has central air-conditioning and forced-air heating systems, but it does not have a humidity-monitoring or -control system. The targeted temperature range is 68–72°F. Dust filters in the vents are changed by the maintenance staff on an as-needed basis. The offices have fluorescent lights without ultraviolet filters. The janitorial staff cleans this repository twice weekly.

Pest Management

The program for pest management consists of regular monitoring and as-needed control procedures. There have been past episodes of silverfish and ant infestation. No signs of rodent or insect infestation were observed by the St. Louis District team during the site visit.

Security

Repository 2 has one exterior door with a key lock and an intrusion alarm, which is connected directly to a contracted security company. Access to this structure is controlled by personnel assigned to the offices within the building; each has a key. Windows are not wired with an intrusion alarm and are accessible from the ground; however, there have not been any episodes of unauthorized entry in the past.

Fire Detection and Suppression

A smoke detector is the only piece of fire-detection equipment present. A fire extinguisher in the hallway outside the office was last inspected in November 1992. No sprinkler system is present.

Artifact Storage

No artifacts are housed in Repository 2. Refer to the assessment of Repository 1, above, for a discussion of artifact storage at CINP.

Laboratory Processing and Labeling

All artifacts at CINP are housed in Repository 1. Refer to the assessment of Repository 1, above, for a discussion of laboratory processing and labeling at this facility.

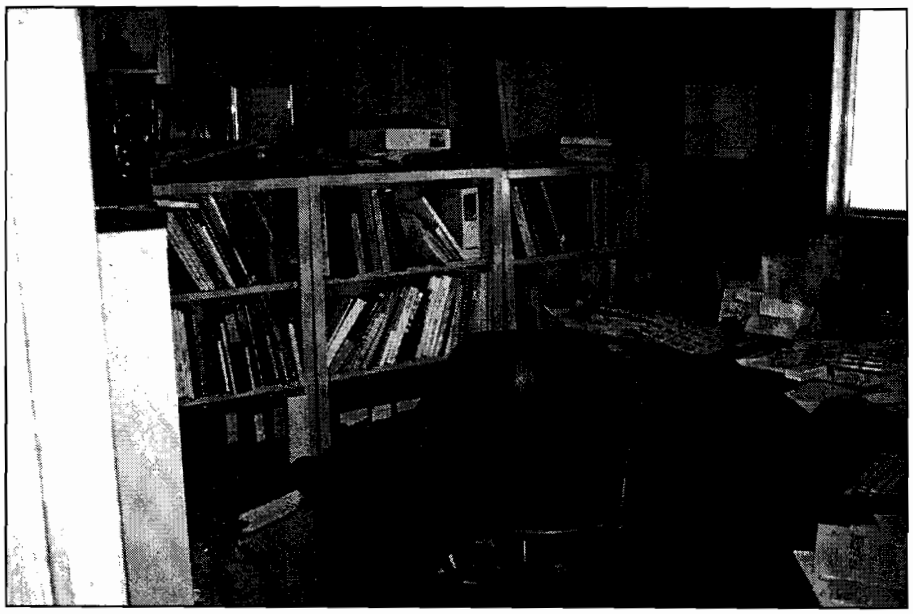

Figure 61. Associated records from San Nicolas Island are housed on baked-enamel metal shelves in the office space for curatorial personnel.

Human Skeletal Remains

No human skeletal remains from naval shore facilities are being curated at this repository.

Records Storage

Approximately 1.2 linear feet of associated documentation (Figure 61) from San Miguel Island is housed within Repository 2. Storage units include 51-x-30-x-13-inch (w x h x d) baked-enamel shelving units, a 57-x-18-x-28-inch five-drawer, legal-size file cabinet, and a 34-x-12-x-12-inch (w x h x d) wire rack for maps. Site records, reports, accession files, field notes, photographs and slides, and maps are stored in this repository. Duplicates of site records, reports, and some photographs are located in the Visitor Center library. Copies have not been duplicated on acid-free paper. The library was not assessed by the St. Louis District team.

Paper Records

Paper records total less than 1 linear foot. Original site records and field notes are located on the bottom shelf of a baked-enamel, metal shelving unit with no primary or secondary containers. Documentation is bound and labeled in black marker on the spine of the documents.

Accession files are stored in acidic folders in a five-drawer, legal-size file cabinet, which has an acidic-paper label held in place by a metal label holder. Some of the documentation is in direct contact with contaminants such as paper clips and staples. Folders are labeled with adhesive, paper tags that have been typed or written on in pen.

Photographic records

Less than 1 linear foot of photographic records are stored in two binders, each 3 inches thick. The St. Louis District team was informed that additional photographs may be stored with the site-record files. These photographs need to be removed from the files and placed in binders. Some of the San Miguel Island color slides observed on the collection manager's desk have not been cataloged, but are in archival, plastic sleeves.

Maps and Oversized Documents

Less than 1 linear foot of maps associated with San Miguel Island are stored in Don Morris's office. Map storage is accomplished by rolling

the maps and standing them on end. The edges of the maps are becoming bent and frayed, and the maps are yellowing from exposure to light and lack of environmental controls. No steps have been taken to preserve these maps.

Assessment of Both Repositories

Collections Management Standards

Registration Procedures

Accession Files

All materials are accessioned upon receipt.

Location Identification

The location of the collection in the repository is identified within the accession file.

Cross-Indexed Files

Files are partially cross-indexed by provenience and location within the repository.

Published Guide to Collections

A guide to the collections has not been published.

Site-Record Administration

A trinomial site-numbering system is used.

Computerized Database Management

An inventory of all artifacts is maintained on a computerized database-management system.

Written Policies and Procedures

Minimum Standards for Acceptance

The February 1985 NPS Scope of Collections Statement establishes standards for the acceptance of archeological materials. It is currently being revised and updated.

Curation Policy

A comprehensive, written plan for the curation of archeological materials and associated documentation has not been produced. At the present time, CINP is following guidelines in several museum handbooks.

Records-Management Policy

At the time of the St. Louis District's visit, a written records-management policy was not in place. All associated documentation is currently housed in office files. A duplicate copy of some of the records is also located in the CINP library, which is located in a separate building.

Field-Curation Procedures

The NPS issues a Collection Permit that addresses what must be done if field researchers collect archeological materials.

Loan Policy

In the February 1985 NPS Scope of Collections Statement , the loan policy addresses loan conditions, term of the loan, responsibilities for insurance, and the environment and security of the planned exhibit or storage areas.

Deaccessioning Policy

CINP does not have a written deaccessioning policy.

Inventory Policy

No written inventory policy has been established by CINP; however, inventories are kept with the associated documentation when provided. Curatorial personnel consult museum handbooks on this issue. A master catalog for all collections is on file at CINP.

Latest Collection Inventory

Collections were last inventoried in November 1993.

Curation Personnel

CINP has a two-person staff that is responsible for the collections: Don Morris, cultural resources director, and Kathleen Baldwin, museum technician. The position of curator is temporary.

Curation Financing

The funding for Baldwin's position and curation materials comes from the resource-management budget for the CINP.

Access to Collections

Access to collections is controlled by curation personnel. An appointment is required for collections use, and researchers are supervised while using the materials.

Future Plans

Future plans include bringing the archeological collections up to federal standards of curation, acquiring a complete inventory of all Channel Islands materials at other repositories, and acquiring additional space where researchers can study the collections.

Comments

1. Artifact collections are well organized and easily accessed.

2. Repository 1 does not have an operational fire-suppression system. The sprinkler system in the repository is not functional, and no extinguisher is present in the repository.

3. Historical-period metal artifacts stored in Repository 1 have rusted because of a sprinkler pipe that broke in September 1992.

4. An integrated pest-management system has not been implemented in either repository.

5. Lighting in Repository 2 does not have ultraviolet filters.

6. Humidity levels are monitored, but not controlled, in Repository 1; levels are not monitored or controlled in Repository 2.

7. Twenty percent of the artifacts are not labeled.

8. Most of the slides are stored in archival, plastic sleeves.

9. Storage of the associated paper records from San Miguel Island does not meet modern archival standards.

10. Duplicates of a portion of the associated documentation have been made, but not on acid-free paper.

11. Oversized maps, which are rolled up and are standing on end, show signs of deterioration from use and exposure to nonfiltered light sources.

Recommendations

1. Install adequate fire-detection and -suppression systems in both repositories.

2. Implement a reliable, consistent pest-management program that includes monitoring and control for all storage areas.

3. Place ultraviolet filters on the fluorescent lights in Repository 2.

4. Install an HVAC system to monitor and control the temperature and humidity in both repositories.

5. Replace secondary artifact containers with 4-mil, zip-lock, polyethylene bags, and label these with indelible ink. Labels for secondary containers should be made from spun-bonded, polyethylene paper (e.g., Nalgene polypaper), written in indelible ink, and inserted into the containers.

6. Label each artifact individually with indelible ink and seal with a clear coating to prevent loss of context if artifacts are separated from provenience information.

7. Place all unprotected slides, photographs, and negatives in archival, polypropylene sleeves; place sleeves in acid-free, three-ring binders. Photograph logs should be on acid-free paper in indelible ink.

8. Store photographic records in a stable environment that has humidity- and temperature-monitoring and -control devices.

9. Remove all contaminants (e.g., staples, paper clips, and rubber bands) from original documents.

10. Duplicate all paper records on acid-free paper, and place these copies in acid-free folders labeled in indelible ink. Place all folders in acid-free, cardboard boxes and apply adhesive, polyethylene label holders with acid-free paper inserts to the boxes.

11. Store duplicates of all associated documentation in a separate, fire-proof, secure location.

12. Flatten oversized material and place in flat map-storage cases for long-term curation.

13. Arrange associated documentation according to modern archival procedures, and create a finding aid for the documentation collection.

14. Develop a budget that provides for a permanent curator and archival materials for collections and associated documentation.

36

Lompoc Museum

Lompoc, California

Repository Summary

Volume of Artifact Collections: 1 ft^3

Collection Origin: OLF San Nicolas Island and San Miguel Island

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

Linear Feet of Records: < 1 linear foot

Compliance Status: Documentation will require complete rehabilitation to comply with current federal guidelines and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: The museum receives a $50,000 grant from the city of Lompoc each year. The costs and expenses for all museum activities are paid from these grants.

Date of Visit: January 18, 1994

Points of Contact: Debra Argel, director, and Donna Whitney, administrative assistant

The Lompoc Museum is located in the 1910 Carnegie Library structure (Figure 62) in downtown Lompoc, California. A new library was built in 1970, and the museum moved into the small, split-level former library building. The museum houses exhibits that display 1 ft^3 of artifacts collected on OLF San Nicolas Island and San Miguel Island, both of which are the property of the U.S. Navy. Less than 1 linear foot of associated documentation is located at this facility. No human skeletal remains are present in this collection.

Assessment

The Lompoc Museum has one floor above ground that contains office space for the museum director, an exhibit area, and a counter where souvenirs can be purchased. The bottom floor, partially below ground, contains additional exhibit space, office space, a rest room, and an artifact-processing room. The exhibit area on the top floor is considered the collections storage room. Information about the museum's structure, environmental controls, security, pest management, and fire protection also applies to the collections storage room.

Structural Adequacy

The Lompoc Museum has a concrete foundation and exterior walls built of solid, sand-colored bricks. The 25-year-old roof is made

Figure 62. Exterior view of brick and stone building that houses the Lompoc Museum.

of composite, asphalt shingles. A short flight of concrete steps leads to glass double doors at the front of the museum. The building has withstood several earthquakes with no structural damage. Windows have wooden frames and are original to the structure. Shades and ultraviolet-protectant film cover all windows.

Environmental Controls

Temperature is controlled by a heating system with an electronic air filter. The filter is changed by staff on an as-needed basis. There is no HVAC system present. Humidity is not monitored or controlled. Nonfiltered fluorescent tubes are used in the light fixtures; however, ultraviolet filters are attached to the tubes in the display cases. The city of Lompoc is responsible for repairing any damage to the structure, and a professional janitorial service is employed by the city to clean the museum weekly. Plumbing and electrical systems were replaced by the city 15–20 years ago. A leak in the roof and a leak through a window were repaired by the city.

Pest Management

There is no integrated pest-management system in place at the Lompoc Museum. A contracted pest-management company is used on an as-needed basis to rid the building of any infestations. A termite problem was solved in December 1993 by spraying with insecticide. The St. Louis District team did not detect any signs of insect or rodent infestation during the site visit.

Security

The museum has an intrusion alarm connected to all external windows and doors. The alarm alerts a contracted security company, which notifies the police department. Locks are present on all windows, doors, and display cases. Metal bars across ground-level windows provide extra security (see Figure 62). In the past there have been incidents of artifact theft, possibly by staff members no longer working at the museum.

Fire Detection and Suppression

Fire-detection systems present in the Lompoc Museum include several smoke alarms and a sprinkler system installed throughout the facility. Manual fire extinguishers are located in the collections storage area. A fire-proof cabinet is used to store duplicates of associated documentation and photographic materials. This cabinet is located on the top floor of the building.

Figure 63. Painted wood exhibit cases at the Lompoc Museum house artifacts from San Nicolas and San Miguel Islands.

Artifact Storage

Storage Units

All artifacts are on display in exhibit cases (Figure 63). They are not stored as a unit, but are sorted by their different functions. The exhibit cases are constructed of painted wood and have two panes of sliding glass. The glass panes overlap slightly and are locked with a simple key latch. The fluorescent lights in the display cases have ultraviolet filters.

Primary Containers

The artifacts are not stored in primary containers while on display (but see below).

Secondary Containers

The artifacts are not stored in secondary containers when on display. The San Nicolas and San Miguel Islands artifacts were removed from the display cases, placed in plastic bags, and stored in an acidic-cardboard box for the convenience of the St. Louis District team, who could then easily assess the collections and photograph the individual objects.

Laboratory Processing and Labeling

All of the artifacts, which are 100 percent lithics, have been cleaned and labeled (Figures 64 and 65). The artifacts are labeled with either black ink on white paint or white ink directly on the object. All labels are sealed with a clear, acrylic coating. In addition to these labels, some of the artifacts still have their original, adhesive, acidic-paper labels.

Human Skeletal Remains

No human skeletal remains are being curated at this repository.

Records Storage

All associated documentation is accounted for and easily accessed. It is arranged by the case number within which the artifacts are on display and by the provenience of the artifact. The director and administrative assistant are responsible for records maintenance and security. In addition to the fireproof cabinet, one legal-size, five-drawer filing cabinet is the only space available for records storage.

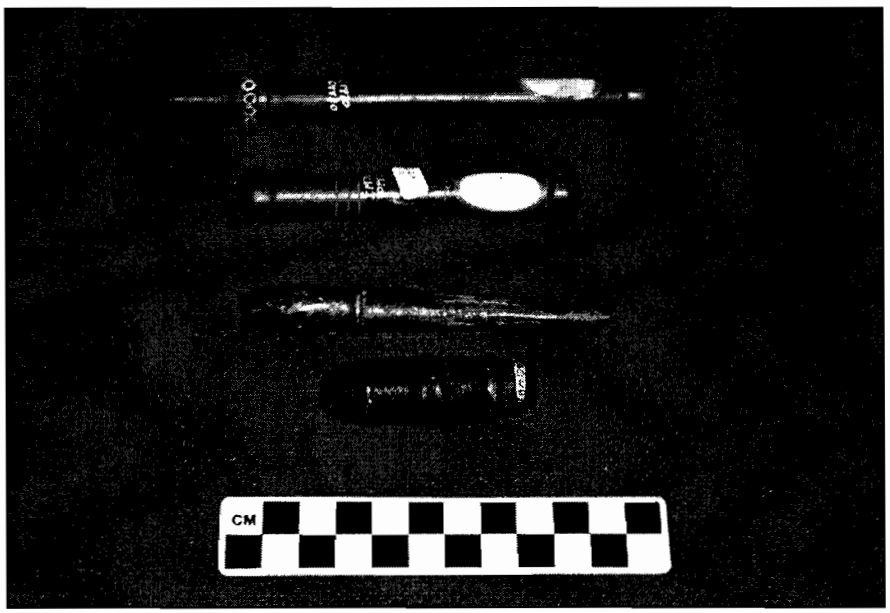

Figure 64. All of the artifacts from San Nicolas and San Miguel Islands at the Lompoc Museum have been cleaned and labeled.

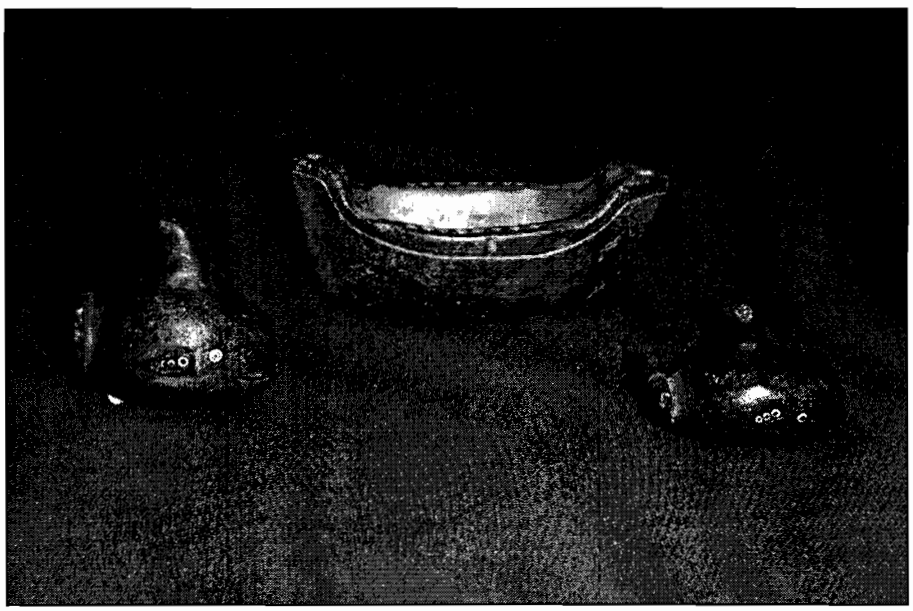

Figure 65. Steatite effigies from San Nicolas Island are on display at the Lompoc Museum.

Paper Records

Approximately two of the legal-size drawers within the filing cabinet and two drawers of duplicates in the fire-proof cabinet are devoted to the storage of paper records associated with federal collections. The three curatorial staff members have sole access to the records. There is no checkout system.

Photographic Records

All photographs are stored in the fireproof cabinet.

Collections-Management Standards

Registration Procedures

Accession Files

All materials are accessioned upon receipt.

Location Identification

The physical location of collections within the repository are identified in the accession file.

Cross-Indexed Files

The files are cross-indexed by location of the objects in the repository and by artifact provenience.

Published Guide to Collections

No guide to the collections has been published.

Site-Record Administration

A trinomial site-numbering system is used.

Computerized Database Management

All of the collections records has been entered into a computerized database-management program called "Nutshell." The collections records are stored locally, not on a network. A backup is made onto a disk every time new data are entered. These disks are kept in the fireproof cabinet located on the aboveground floor of the structure.

Written Policies and Procedures

Minimum Standards for Acceptance

Collections are no longer accepted because of a lack of storage space. However, a written acceptance policy is in place.

Curation Policy

A curation policy details the activities necessary for the processing of artifacts, paper records, and photographic materials.

Records-Management Policy

Records management is addressed in the curation policy.

Field-Curation Procedures

UCSB is the only institution that has performed fieldwork in conjunction with the Lompoc Museum; university guidelines were followed. The guidelines are presented in the "Procedure for the Submission of Archaeological Collections for Curation," issued by the Repository for Archaeological and Ethnographic Collections, Department of Anthropology, UCSB. These guidelines include discussions of acquisition, accession numbers, preparation of the collection and associated documentation, artifacts, artifact bags, catalog numbers, organization, and curation costs.

Loan Policy

The Lompoc Museum has a written loan policy that addresses loan conditions, period of loan, responsibilities for insuring, packaging, and shipping, and stipulations for proper labeling. Loans must be approved by the director and the board of trustees.

Deaccessioning Policy

Items nominated to be deaccessioned must be approved by the director and the board of trustees. All associated records that are with the items are retained as permanent records. The director and the board of trustees discuss the ethics involved and decide on the method of and restrictions on deaccessioning the item or items.

Inventory Policy

The museum does not have a written inventory policy. A copy of the initial inventory is retained if provided.

Latest Collection Inventory

The collections were last inventoried in 1993.

Curation Personnel

Museum curatorial personnel consist of Debra Argel, director; Carol Fisher, curator of education; and Donna Whitney, administrative assistant.

Curation Financing

The Lompoc Museum receives a $50,000 grant from the city of Lompoc each year. These funds are used for all activities within the museum, including curation.

Access to Collections

Only members of the curatorial staff, named above, have direct access to the collections. Access to collections by researchers is arranged and supervised by the staff.

Future Plans

There are no current plans for upgrading the museum or its curation guidelines until increased financing becomes available.

Comments

1. The Lompoc Museum does not have adequate storage space for current collections and cannot accept additional collections.

2. Space provided for the processing of artifacts is inadequate.

3. Duplicates of associated documentation, photographs, and computer disks are kept in a fireproof cabinet.

4. A computer search for items from the San Nicolas Island collection failed to retrieve at least two artifacts. The St. Louis District team identified two pieces of steatite that belonged in the San Nicolas Island collection. These artifacts were on display in their exhibit cases.

Recommendations

1. Remove artifacts from display cases. These artifacts are currently exposed to harmful ultraviolet rays from natural and artificial light and to outgassing from the nonsealed, wooden exhibit cases.

2. Rehabilitate all artifacts. All artifacts need accession, catalog, and site numbers on their labels. These labels should be marked directly on the object with indelible ink and sealed with a clear coating to prevent loss of context if artifacts are separated from provenience information.

3. Duplicate all associated documentation on acid-free paper and store in a separate, fireproof, secure location.

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

5. Develop a long-term budget providing for curation materials and activities.

6. If the museum intends to expand, provide additional space to include laboratory and storage facilities.

7. Develop an emergency-management plan if one is not already in place.

37

Natural History Museum of Los Angeles County

Los Angeles, California

Repository Summary

Volume of Artifact Collections: 128.5 ft^3

Collection Origin: OLF San Nicolas Island and San Miguel Island

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

Linear Feet of Records: 5 linear feet

Compliance Status: Associated documentation will require complete rehabilitation to comply with current federal guidelines and modern archival-preservation standards.

Human Skeletal Remains: 7 ft^3

Human skeletal remains are from 10 burials. Approximately 4 ft^3 were collected on San Nicolas Island and 3 ft^3 on San Miguel Island. The human skeletal remains of two additional individuals from San Miguel Island were located within artifact drawers.

Status of Curation Funding: Curation of archeological collections is financed through grants, fund-raising activities, an endowment fund from a non-profit foundation set up to support the museum, photography fees, and budgeted funds from Los Angeles County.

Collection Update (October 1997): Recommendations 5, 8, 9, and 10 have been completed with funding from NAWS Point Mugu in 1996 and 1997 (Steve Schwartz, NAWS Point Mugu, personal communication 1997).

Date of Visit: December 10, 13, and 14, 1993

Point of Contact: Chris Coleman, anthropology collections manager

NHMLAC (Figure 66) houses an extensive collection of materials from OLF San Nicolas Island and San Miguel Island, both of which are under the jurisdiction of NAWS Point Mugu. The collections were gathered by Dr. Charles Rozaire and by A. Woodward during a 1939–1941 survey. Additional collectors and donors include John Schrader and H. Kellar.

Assessment

The museum has had several renovations, including wing additions. Artifact and documentation collections from OLF San Nicolas and San Miguel Islands are stored in four collections storage rooms. Collections are stored in Collections Storage Area 1, the Anthropological Collections Storage Room, which contains most of the artifacts and a portion of the associated documentation; Collections Storage Area 2, the anthropology collection manager's office, where most

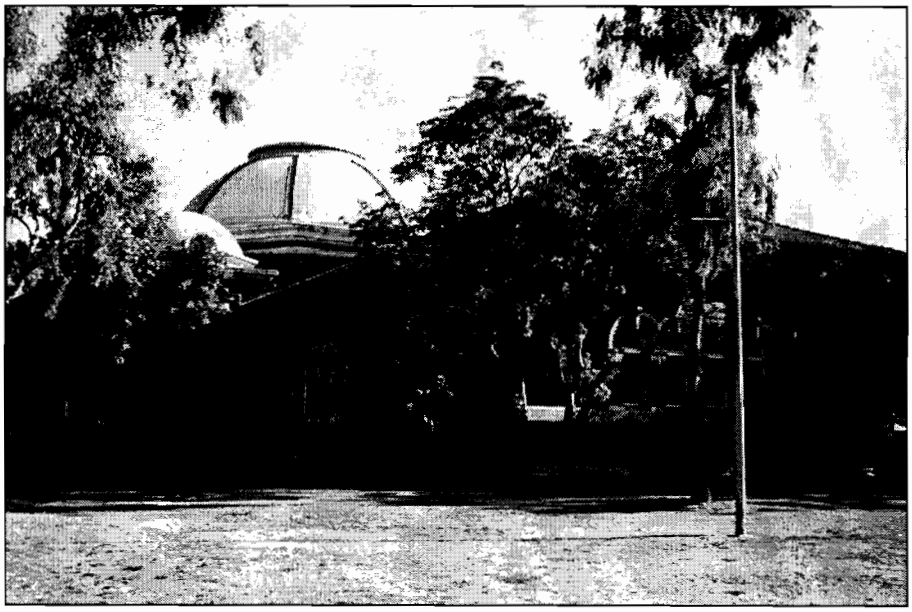

Figure 66. Exterior view of the brick and stone building that houses NHMLAC.

of the associated documentation is located; Collection Storage Area 3, the exhibit area, where a small collection of Channel Island artifacts is displayed; and Collections Storage Area 4, in which human skeletal remains are stored.

Structural Adequacy

Collections Storage Area 1

The 2,500 ft^2 storage area for the majority of the anthropological collections and a portion of the associated documentation is located on the mezzanine level, between the second and third floors, in the new annex. Collections Storage Area 1 has a concrete floor covered with white tile, a concrete ceiling, and concrete-block walls covered with plasterboard. Two rows of open metal shelves, filled with collections, are in the center of the room. Closed, metal storage cabinets are stacked two high along the wall containing most of the islands collections. File cabinets, a map case, a special collections storage area, a small work space, and an office area provided for Dr. Rozaire are located in Collections Storage Area 1.

Collections Storage Area 2

The collection manager's office is the location of most of the associated documentation. It is located in the southwest corner of the third floor, in the original museum structure. The 120-ft^2 room has a concrete floor, plaster interior walls, and a suspended, acoustical-tile ceiling. Two windows with wooden frames original to the structure are located on the exterior wall.

Collections Storage Area 3

The anthropology exhibit area is a large, somewhat complex set of rooms on two levels within a wing of the original rotunda building. The exhibit case containing the Channel Islands collection is on the second floor. The exhibit area is state of the art; a conservator was consulted during design and installation.

Collections Storage Area 4

The room used for curation of human skeletal remains is on the third floor of the museum, and encompasses approximately 120 ft^2. This room was previously used as an office and conservator's lab, and is similar to the collection manager's office. The floors are concrete, covered with tile. The ceiling is concrete, covered with plasterboard. Two wood-framed windows are located on the exterior wall opposite the entrance.

37

Natural History Museum of Los Angeles County

Los Angeles, California

Repository Summary

Volume of Artifact Collections: 128.5 ft^3

Collection Origin: OLF San Nicolas Island and San Miguel Island

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

Linear Feet of Records: 5 linear feet

Compliance Status: Associated documentation will require complete rehabilitation to comply with current federal guidelines and modern archival-preservation standards.

Human Skeletal Remains: 7 ft^3

Human skeletal remains are from 10 burials. Approximately 4 ft^3 were collected on San Nicolas Island and 3 ft^3 on San Miguel Island. The human skeletal remains of two additional individuals from San Miguel Island were located within artifact drawers.

Status of Curation Funding: Curation of archeological collections is financed through grants, fund-raising activities, an endowment fund from a non-profit foundation set up to support the museum, photography fees, and budgeted funds from Los Angeles County.

Collection Update (October 1997): Recommendations 5, 8, 9, and 10 have been completed with funding from NAWS Point Mugu in 1996 and 1997 (Steve Schwartz, NAWS Point Mugu, personal communication 1997).

Date of Visit: December 10, 13, and 14, 1993

Point of Contact: Chris Coleman, anthropology collections manager

NHMLAC (Figure 66) houses an extensive collection of materials from OLF San Nicolas Island and San Miguel Island, both of which are under the jurisdiction of NAWS Point Mugu. The collections were gathered by Dr. Charles Rozaire and by A. Woodward during a 1939–1941 survey. Additional collectors and donors include John Schrader and H. Kellar.

Assessment

The museum has had several renovations, including wing additions. Artifact and documentation collections from OLF San Nicolas and San Miguel Islands are stored in four collections storage rooms. Collections are stored in Collections Storage Area 1, the Anthropological Collections Storage Room, which contains most of the artifacts and a portion of the associated documentation; Collections Storage Area 2, the anthropology collection manager's office, where most

Figure 66. Exterior view of the brick and stone building that houses NHMLAC.

of the associated documentation is located; Collection Storage Area 3, the exhibit area, where a small collection of Channel Island artifacts is displayed; and Collections Storage Area 4, in which human skeletal remains are stored.

Structural Adequacy

Collections Storage Area 1

The 2,500 ft^2 storage area for the majority of the anthropological collections and a portion of the associated documentation is located on the mezzanine level, between the second and third floors, in the new annex. Collections Storage Area 1 has a concrete floor covered with white tile, a concrete ceiling, and concrete-block walls covered with plasterboard. Two rows of open metal shelves, filled with collections, are in the center of the room. Closed, metal storage cabinets are stacked two high along the wall containing most of the islands collections. File cabinets, a map case, a special collections storage area, a small work space, and an office area provided for Dr. Rozaire are located in Collections Storage Area 1.

Collections Storage Area 2

The collection manager's office is the location of most of the associated documentation. It is located in the southwest corner of the third floor, in the original museum structure. The 120-ft^2 room has a concrete floor, plaster interior walls, and a suspended, acoustical-tile ceiling. Two windows with wooden frames original to the structure are located on the exterior wall.

Collections Storage Area 3

The anthropology exhibit area is a large, somewhat complex set of rooms on two levels within a wing of the original rotunda building. The exhibit case containing the Channel Islands collection is on the second floor. The exhibit area is state of the art; a conservator was consulted during design and installation.

Collections Storage Area 4

The room used for curation of human skeletal remains is on the third floor of the museum, and encompasses approximately 120 ft^2. This room was previously used as an office and conservator's lab, and is similar to the collection manager's office. The floors are concrete, covered with tile. The ceiling is concrete, covered with plasterboard. Two wood-framed windows are located on the exterior wall opposite the entrance.

Environmental Controls

Collections Storage Area 1

No environmental controls are present; temperatures range from 50 to 70°F. Humidity levels are monitored with a hygrothermograph, but are not controlled. Light sources consist of ultraviolet filtered fluorescent tubes. Pipes are located above the collections. Past incidents of leakage were corrected immediately, with no damage sustained by any of the Navy's collections. Cleaning and maintenance take place on an as-needed basis.

Collections Storage Area 2

Environmental controls consist of a zoned, forced-air heating system and a window air conditioner. No dust filters are present. Humidity levels are not monitored or controlled. Light sources include ultraviolet filtered fluorescent tubes and natural light. Cleaning and maintenance take place on an as-needed basis.

Collections Storage Area 3

The exhibit area has an HVAC system for environmental control. A conservator was involved in the development of the exhibit area. Light sources are filtered and set at low levels. Cleaning and maintenance take place on an as-needed basis.

Collections Storage Area 4

Environmental controls for this area, where human skeletal remains are curated, consist of a window air conditioner. A radiator is present for heating, but may not be functional. There are no dust filters present. Humidity levels are monitored with a hygrothermograph, but not con-trolled. The collections manager reports that there are no major temperature or humidity fluctuations. Nonfiltered windows and ultraviolet filtered fluorescent tubes provide light. A cabinet in the room contains chemicals left by the conservator; these include desiccants, gels, and calcium carbonate. Cleaning and maintenance take place on an as-needed basis.

Pest Management

No signs of pest infestation were observed by the St. Louis District team during the assessment. No-pest strips are used as monitors for pest infestations. Storage rooms are regularly sprayed under the supervision of a conservator. A conservator is always consulted when a problem is noticed.

Security

Security measures for the museum include a 24-hour, in-house guard. All exterior doors have dead-bolt locks, and all windows have locks.

Collections Storage Area 1

Two sets of doors provide access to this area. They remain locked at all times, and each requires a different key. There are no windows in this area.

Collections Storage Area 2

Two doors provide access to this area, one leading to the hallway and the other to the office of the anthropology section head. Doors are secured with key locks, and access is controlled by museum staff. Windows have latch locks and are only accessible from the outside with a ladder. No unauthorized access has been reported.

Collections Storage Area 3

The small collection of artifacts located in a built-in exhibit case is secured with security screws and a door with a dead-bolt lock. Artifacts are attached to a burlap background with "L" hooks. Coleman is the only person who has keys to the anthropology exhibits.

Collections Storage Area 4

A key lock provides security for the door. Latch locks provide security for the windows. The windows are accessible from the outside only with a ladder. No unauthorized access has occurred.

Table 11. Summary of Material Classes Present in the San Nicolas and San Miguel Islands Collections in Collections Storage Area 1 at the LA County Museum of Natural History, by Percentage

Material Class	%
Prehistoric	
Lithics	38
Human remains	1
Faunal remains	18
Shell	16
Soil	1
^{14}C	2
Textiles	20
Other	2
Historical-period	
Ceramics	0.5
Glass	1
Metal	0.5
Total	100

Note: Percentages based on total ft^3 of materials in the collection.

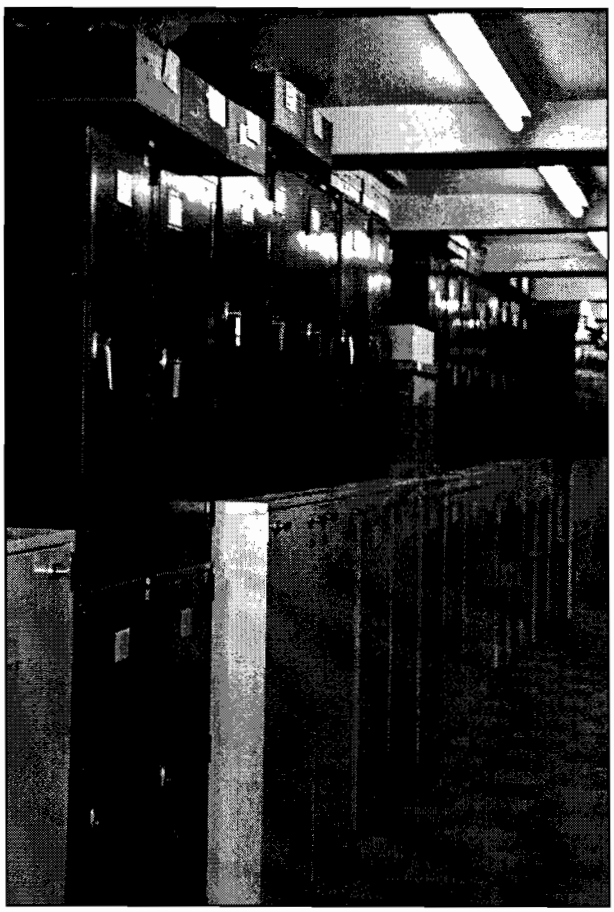

Figure 67. Stacked metal cabinets, lined with wood, house materials from San Nicolas and San Miguel Islands that are stored at NHMLAC.

Fire Detection and Suppression

Fire-detection and -suppression systems include manual fire alarms in the hallways and public areas (wired to the fire department), fire extinguishers in each room, sprinkler systems in Collections Storage Area 1 and exhibit areas, fire doors in Collections Storage Area 1, and smoke detectors in public areas.

Artifact Storage

Artifacts are stored in Collections Storage Areas 1 and 3. Table 11 provides a summary of material classes present in the Navy's San Nicolas and San Miguel Islands collections located in Collections Storage Area 1. Percentages in this table do not include human skeletal remains or the small quantity of materials on display in Collections Storage Area 3.

Storage Units

In Collections Storage Area 1, artifacts are stored in stacked metal cabinets measuring 37 x 29 x 32 inches (Figure 67). These storage cabinets are lined with wood. Doors on the cabinet either swing open on hinges or detach completely and are left unlocked.

Storage units for ground-stone artifacts are adjustable metal shelving units measuring 72 x 47 x 62 inches (Figure 68). Shelves are labeled with 3-x-5-inch acidic-paper cards taped to the units. Labels are written in marker or typed. Carpet pieces that have been turned over serve as padding for the heavy and abrasive artifacts on the shelves. Large ground-stone artifacts from San Nicolas and San Miguel Islands are located on portions of two shelving units.

In Collections Storage Area 3 storage units are built-in, wooden exhibit cases with Plexiglas fronts that are secured with screws and a door with a dead-bolt lock.

Primary Containers

In Collections Storage Area 1, primary containers for artifacts housed in cabinets consist of wooden drawers (Figure 69). Drawers are generally unlined, but some have been lined with acid-free paper. Ground-stone artifacts do not have primary containers. Artifacts on display in Collections Storage Area 3 do not have any primary containers.

Secondary Containers

At the time of the assessment, secondary containers for the collections included loose storage in drawers (56%), plastic bags (23%), acidic-cardboard trays (5%), acidic-paper envelopes (5%), plastic vials and trays (5%), acidic-paper bags (1%), and other (5%). Other included wooden trays, cloth bags, and enclosed wood-and-glass boxes lined with acid-free paper. One notable wood-and-glass box contained a large sea-grass skirt on a backing of cotton.

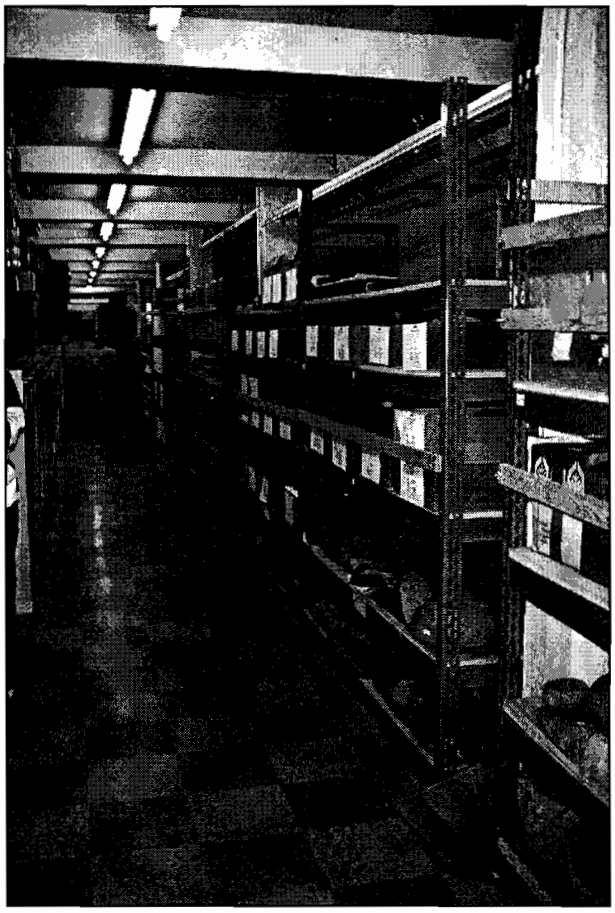

Figure 68. Ground stone is housed on the bottom shelves of metal and wood shelving units.

Figure 69. Wooden drawers house the artifacts at NHMLAC.

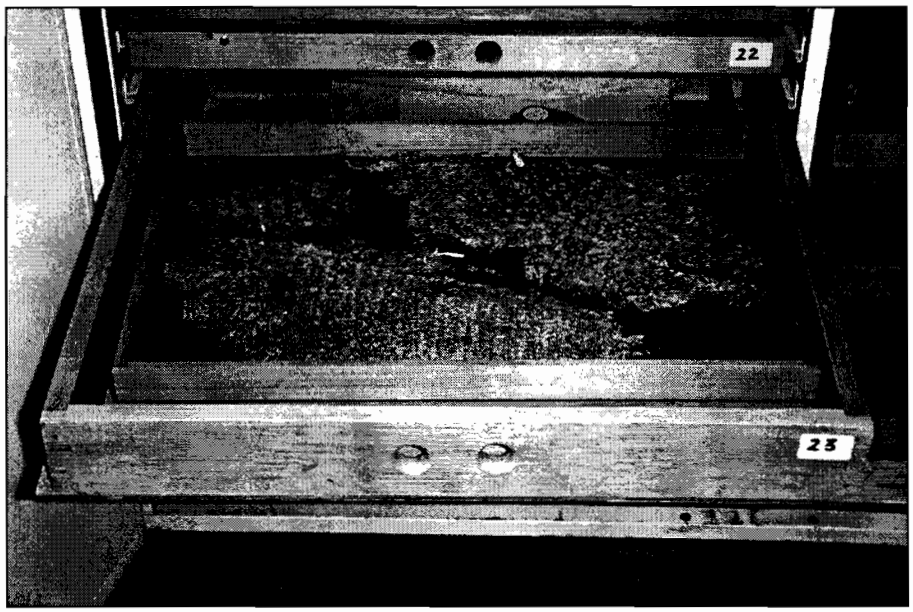

Figure 70. Textiles are labeled with paper tags attached with cotton string.

Laboratory Processing and Labeling

Artifacts have been cleaned, and have been labeled with india ink directly on the artifact or on a coat of white paint. Most labels are sealed with a clear, protective coating. Materials such as textiles have acidic-paper tags attached to them with cotton string (Figure 70).

Human Skeletal Remains

The 7 ft^3 of human skeletal remains consists of approximately 10 individuals. Four ft^3 of human skeletal remains were collected on San Nicolas Island, and 3 ft^3 of human skeletal remains were collected on San Miguel Island. These are stored in standard-sized, acid-free boxes on an open, six-shelf storage unit measuring 36.5 x 83 x 72 inches (Figure 71). Primary containers have computer-generated labels taped to the box. Information has been filled in with black marker. Secondary containers include 2- and 4-mil, ziplock bags and ethafoam. The remains have been cleaned and labeled directly with india ink. The majority of the human skeletal remains are stored in Collections Storage Area 4, but two drawers of human remains were identified in Collections Storage Area 1, the regular anthropology collections storage area. These will be integrated with the rest of the human skeletal

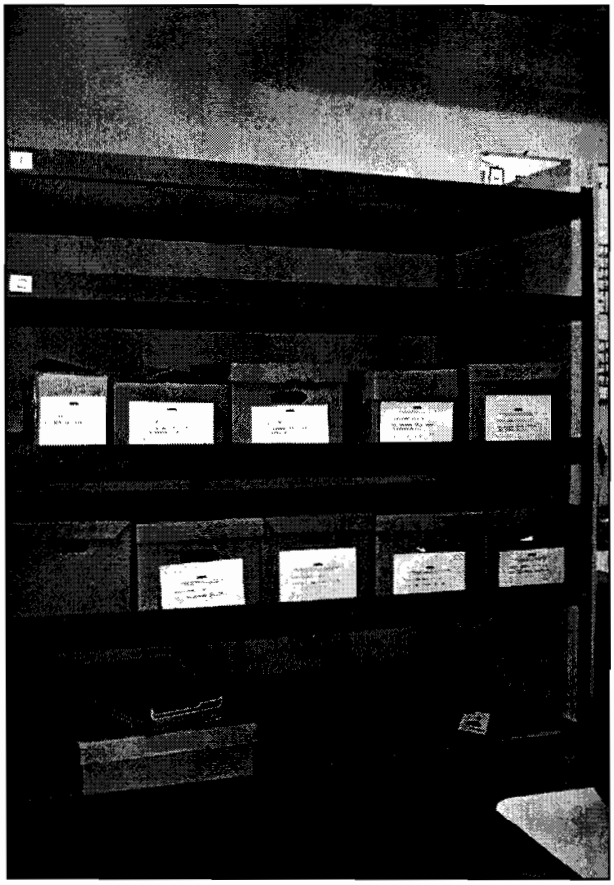

Figure 71. Human skeletal remains from the San Nicolas and San Miguel Islands are housed in acid-free cardboard boxes on open metal shelves.

remains in Collections Storage Area 4. The human skeletal remains located in Collections Storage Area 4 have recently been moved from an off-site storage building, which lacked any environmental controls.

Records Storage

Records are stored in two places: Collection Storage Area 1, which contains old catalog cards and maps (Figure 72), and Collections Storage Area 2, which contains Rozaire's original documentation and additional anthropology section files.

Paper Records

Paper records stored in Collections Storage Area 1 consist of old catalog cards stored in a file cabinet. The majority of the records are kept in Collections Storage Area 2, in letter-size, metal filing cabinets. At the time of the assessment, most of the records are Rozaire's files, which Coleman was currently processing. Records were in acid-free file folders that had adhesive, computer-generated labels. Label information included description of contents, inclusive dates, island name, folder number, and accession number. Records included administrative records, background materials, field records, analysis records, and artifact lists. Once the records were processed, they were moved to Collections Storage Area 3 for storage. Accession files are kept in the registrar's office. These were not assessed.

Photographic Records

Photographic records were not available for assessment, as they are currently being rehabilitated. Records will eventually be stored in the Ethnographic Storage Room, which has environmental controls and a sprinkler system.

Maps and Oversized Documents

Maps are stored in the third drawer, labeled "Islands," of a metal map case located in Collections Storage Area 1. Documents are separated by sheets of acid-free tissue paper and include bluelines, drawings, maps, and oversized photographs of aerial views and artifacts in situ; negatives are included. Collections from both Woodward and Rozaire are represented. The condition of the collection has deteriorated; some documents are yellowed, torn, or stained. Only a few documents are labeled.

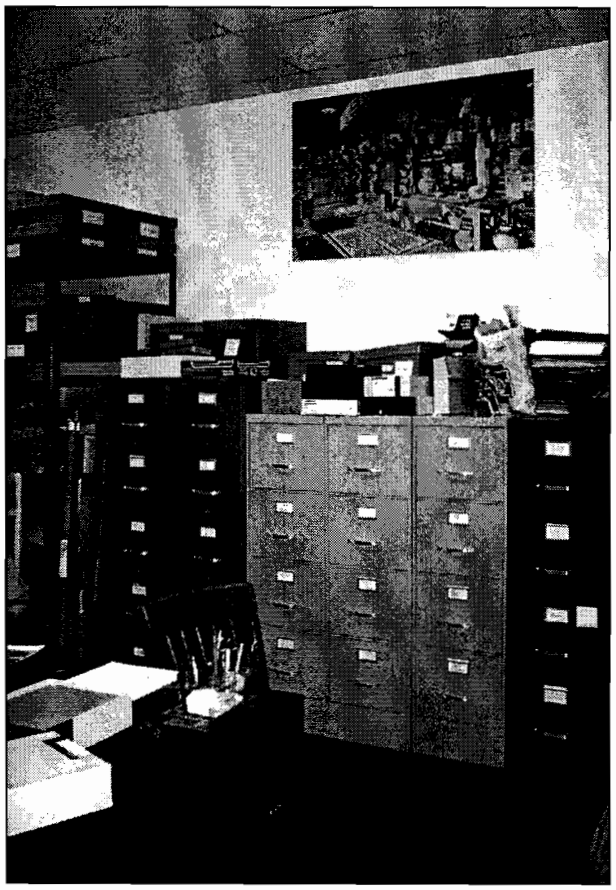

Figure 72. Collections Storage Area 1 at NHMLAC also houses associated records from San Nicolas and San Miguel Islands.

Reports

No reports associated with collections from naval shore installations are housed at this facility.

Collections-Management Standards

Registration Procedures

Accession Files

Artifacts are accessioned upon receipt by the registrar. The registrar's office assigns accession

numbers, maintains donor files, and keeps artifact lists for each collection. These records remain in the office of the registrar.

Location Identification

Collection location is not identified within the accession file. The anthropology section maintains control of collections through a computerized database and a binder containing an in-house guide to the collections.

Cross-Indexed Files

Files are not cross-indexed. Collections are identified by corresponding site designations, which are filed in alphabetical order. Photos are organized numerically according to their negative numbers. Information on any artifact or collection can also be searched for and located through the computer database.

Published Guide to Collections

No guide to the collections has been published. A multivolume set of records listing all federal collections from California by geographic location and accession number is available for use.

Site-Record Administration

A trinomial site-numbering system is employed where applicable.

Computerized Database Management

Museum staff have designed their own computerized database, based on catalog cards, using Filemaker Pro, a Macintosh database. It was originally designed for ethnographic collections, but Coleman adapted it for use with archeological collections. This can be downloaded and inserted into a new system if desired.

Written Policies and Procedures

Minimum Standards for Acceptance

Minimum standards for acceptance include complete documentation of provenience. Nothing will be accepted that may present legal problems for the museum. Few archeological collections are accepted due to space constraints.

Curation Policy

A comprehensive curation policy has been written.

Records-Management Policy

No written records-management policy is currently in place. However, the current collections manager has initiated records rehabilitation; this includes assessing, organizing, and computerizing the data and developing records-management policies.

Field-Curation Procedures

No field-curation guidelines have been established. The museum no longer accepts archeological collections from researchers.

Loan Policy

Loans are processed through the registrar's office. Standard loan forms are used for incoming, long-term, and out-going loans. Additional stipulations made by the anthropology section include a ban on photography, proof of insurance, and coverage of shipping costs.

Deaccessioning Policy

Deaccessioning of objects must be approved by obtaining the signatures of the registrar, the director, and the division head.

Inventory Policy

The inventory policy includes a system that categorizes types of collections. Collection category determines the inventory schedule for each type of collection. Collections with a high monetary value are inventoried every five years. The remainder of the collections are inventoried at regular intervals. For security purposes, the inventory schedule for each collection is known to only a few staff members.

Latest Collection Inventory

This could not be determined because of the nature of the inventory policy, as outlined above.

Curation Personnel

Curation personnel include Chris Coleman, anthropology collections manager; Dr. Margaret Hardin, curator of ethnology and section head; Dr. Chris Steiner, assistant curator of ethnology; and Dr. Karen Wise, assistant curator of archaeology.

Curation Financing

Curation is financed through photography fees, budgeted funds from the county, grants, a private museum foundation contributing through an endowment fund, and fund-raising events.

Access to Collections

Access to collections is controlled by Coleman and curation personnel. Coleman has sole access to the exhibited materials. Only staff are unsupervised while in the collections storage areas. Dr. Charles Rozaire works in the collections storage area once a week.

Future Plans

Plans for upgrading the curation program include using acid-free materials for documents and secondary containers. A new map case has been ordered to eliminate overcrowding problems. Perishable items will be placed in new storage structured to help with their special needs. General plans include improving the overall storage, cataloging all collections and computerizing the information, organizing, computerizing and rehabilitating the associated-documentation collection, and developing a management plan that encompasses the ethnographic and archeological collections.

Comments

1. Funding is inadequate for proper care of collections.

2. Acceptance of archeological collections is minimal due to the legal problems related to many collections and the lack of well-documented provenience. Lack of adequate space is also a factor in minimizing incoming collections.

3. As of September 20, 1994, Coleman informed the St. Louis District that Collections Storage Area 4, the human skeletal remains storage room, has been completely cleaned out and has only three open shelving units holding human skeletal remains. He plans to drape clean bed sheets over the remains to protect them from dust and provide a better environment.

4. Environmental controls are lacking in three of the collections storage areas.

5. Proper fire-detection and -suppression devices are not present in two of the collections storage areas.

6. Records and artifact collections are being curated in nonarchival materials.

7. Chemicals are present in at least two of the collections storage areas.

Recommendations

1. To make more efficient use of space, install new space-saving cabinetry with adjustable shelves in Collections Storage Area 1 to replace the old units.

2. Install an HVAC system to monitor and control the temperature and humidity levels in all collections storage rooms. Install a dust-filtration system in the collections facility.

3. Store chemicals in an appropriate location separate from the records collections and human skeletal remains storage rooms. (Chemicals were removed from all storage areas shortly after the assessment.)

4. Inspect fire extinguishers yearly and install a sprinkler system in each collection storage area.

5. Follow through with plans to rehabilitate records using professional archival procedures, which include producing a finding aid for the documentation collection.

6. Develop an integrated pest-management plan that includes monitoring and control.

7. Replace storage units containing uncoated wood with proper cabinets. Uncoated wood poses the threat of outgassing and damaging the collections.

8. Textile collections need conservation treatment and to be stored in a climate-controlled

environment. A conservator should be consulted in selecting new storage containers for these collections.

9. Replace secondary containers with 4-mil, zip-lock, polyethylene bags and label these with indelible ink. Labels for secondary containers should be made from spun-bonded, polyethylene paper (e.g., Nalgene polypaper), labeled in indelible ink, and inserted into the secondary containers.

10. Remove all contaminants (e.g., staples, paper clips, and rubber bands) from the documents.

11. Duplicate all paper records onto acid-free paper and store the duplicates in a separate, fire-proof, secure location.

12. Formalize policies and procedures for records collections; address the handling of paper records, photographic materials, maps, and the future preservation of these materials.

13. Develop an emergency-management plan.

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Nevada State Museum

Carson City

Repository Summary

Volume of Artifact Collections: 3 ft^3

Collection Origin: NAS Fallon
Compliance Status: Collections will require complete rehabilitation to comply with existing federal guidelines and standards for curation.

Linear Feet of Records: < 1 linear foot
Compliance Status: Documentation will require complete rehabilitation to comply with current federal guidelines and standards for modern archival preservation.

Human Skeletal Remains: A minimum of three individuals (~2 ft^3) from NAS Fallon, is being curated at NSM's Indian Hills Annex. They will require complete rehabilitation.

Status of Curation Funding: Curation funding relies to a great extent on "soft money." Funding for curation is financed through curation fees and annually budgeted state funds.

Date of Visit: February 22–24, 1994

Points of Contact: Amy Dansie, collections manager, and Maggie Brown, site files manager

NSM curates artifacts, associated documentation, and human skeletal remains from NAS Fallon. NSM houses collections from NAS Fallon in both of its repositories. The museum (Figure 73) contains exhibits, offices, and collections storage. Located within Repository 1, which is the Guild Annex in the main museum structure, are a prep shop, galleries, administrative offices, the original coin press, a darkroom, a carpentry shop, and the anthropological and ethnographic collections storage areas. Archeological and ethnographic collections are stored in the basement of Repository 1.

Repository 2, the Indian Hills Annex (Figure 74), is a separate structure on the outskirts of Carson City. It contains a large storage facility, a few offices, and the regional information center where state site files and associated reports are kept. Funds for this activity come from the state Historic Preservation Office, which receives a grant from the National Park Service, and the Bureau of Land Management (BLM). The collections include archeological and paleontological materials.

Assessment of Repository 1

Repository 1 was built in 1971 as an addition to the original structure, the Carson City Mint. This structure, now the main museum building, houses exhibits.

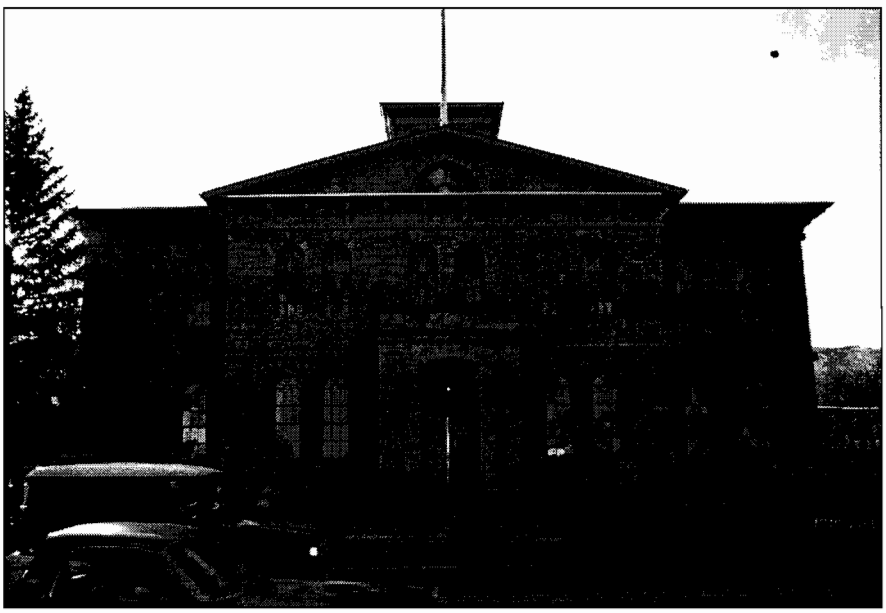

Figure 73. Exterior view of NSM.

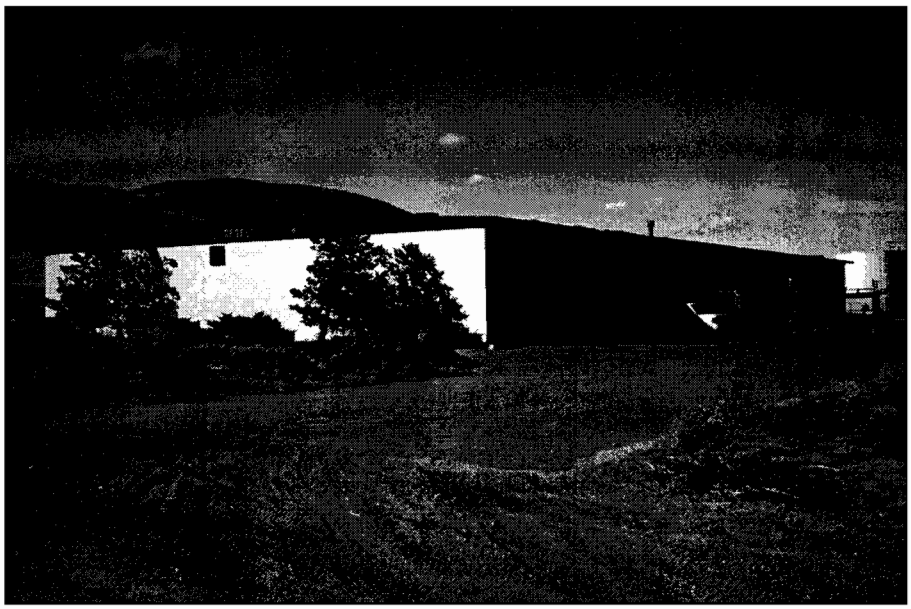

Figure 74. Exterior view of the NSM Indian Hills Annex.

Structural Adequacy

The foundation of Repository 1 is a concrete slab, and the structure has concrete-and-steel exterior walls. The roof has been replaced several times. This repository has two floors above ground and one below. Internal renovations include five retrofits within the last six years. Retrofits included improvements to the fire-safety, electrical, heating, and air-conditioning systems. A major earthquake-safety retrofit was done to the original mint building; emergency lights, a fire door, a manual fire alarm connected to the fire department, and a heat-activated

Table 12. Summary of Material Classes Present in the NAS Fallon Collection at the NSM, by Percentage

Material Class	%
Prehistoric	
Lithics	93
Historical-period	
Glass	6
Metal	1
Total	100

Note: Percentages based on total ft^3 of materials in the collection.

sprinkler system were all added to the anthropology collections storage area during that series of retrofitting.

Only one problematic incident has been reported in the collections storage area. A leak occurred 10 years ago when 13 inches of snow melted through spaces in the air-conditioning units. The water traveled along the floor above the basement and onto two of the storage cabinets. The problem was repaired and the cabinets were replaced.

Environmental Controls

An HVAC system is connected to the galleries and the offices, except where computers are located. Humidity in the collections storage area is monitored by a hygrothermograph, but is not controlled. Relative humidity averages 48 percent. Dansie reports that the environment in the collections storage area has remained relatively stable. Staff regularly maintain the building.

Pest Management

Pest-management efforts include monitoring of perishable materials by staff. The collections area has had no problems with pest infestation, but there have been pests in the gallery area; collections in this area were then fumigated. The policy for the anthropology and ethnography section includes the inspection of perishables at least yearly.

Security

Security measures include video monitoring of the exhibit area during business hours. Intrusion alarms on windows and exterior doors are connected directly to the police department. Security measures for the collections storage area include a 14-x-14-foot special-artifact storage area within the anthropology and ethnography storage room. This area contains only perishable materials and materials with a considerable monetary value. Mainly ethnographic, nonfederal collections are currently being stored here. Security for the rest of the repository is not nearly as adequate; at the time of the assessment there were no locks on the storage cabinets and no complete floor-to-ceiling walls to divide the collections storage area from the other department's basement collections storage areas. All collections storage areas have since been secured with full walls and controlled key locks on doors.

Fire Detection and Suppression

The fire marshall conducts an annual fire-safety inspection of the building, including the collections area. A sprinkler fire-suppression system is present throughout the building. No fire extinguishers are present within the collections storage area, but extinguishers are located outside each of its two doors.

Artifact Storage

Storage Units

Storage units are unpainted, untreated plywood cabinets with metal hinges and handles. Refer to Table 12 for a summary of material classes present in the NAS Fallon collection.

Primary Containers

Primary containers are uncoated wooden drawers within plywood cabinets (Figure 75).

Secondary Containers

Artifacts are stored in 2- and 4-mil, zip-lock bags (Figure 76).

Figure 75. Human skeletal remains are housed in Room 121 of the NSM Indian Hills Annex.

Figure 76. Primary containers in Repository 1 at NSM are wooden drawers in wooden cabinets.

Laboratory Processing and Labeling

The artifacts have been cleaned and are labeled with india ink.

Human Skeletal Remains

Human skeletal remains were assessed only at Repository 2 (see below).

Records Storage

Some records are located in Repository 1, but most types of records are housed in Repository 2.

Paper Records

Accession records and catalog cards are kept in the collections storage area of Repository 1. These are in a wooden cabinet, on acidic paper. No duplicates have been produced.

Photographic Records

No photographic records were observed during the site visit.

Maps and Oversized Documents

No maps or oversized documents are located in this repository. Refer to the assessment of Repository 2, below.

Reports

No project reports are located here. Refer to the assessment of Repository 2, below.

Assessment of Repository 2

Repository 2, the 15,408-ft^2 Indian Hills Annex, is on the outskirts of Carson City. It was built in 1982 to house anthropology labs, collections storage areas, and offices.

Structural Adequacy

Repository 2, also referred to as the anthropology laboratory, is a single-story collections facility that contains offices and the state archeological records and site-file center, which is jointly supported by the state and the BLM. A wing for additional collections storage was added sometime after the building's construction.

The foundation of the structure is concrete. It has a cinder-block exterior. The 12-year-old asphalt roof is structurally sound; no cracks or leaks were observed during the site visit. The ceiling is high, and has exposed insulation. The walls are concrete block. There is a water-residue-like stain on the ceiling in the history collections area. Some collections are stored under functioning pipes, but no evidence of their failure was observed. The building contains several activity areas, including a receiving and loading dock; artifact-holding, -washing, and -processing areas; a temporary artifact-storage area; a materials and supplies storage area; an artifact-study room; a records-study room; a faunal-analysis room; a records-storage room; offices; an equipment bay; and a mechanical-and-utility room.

Human skeletal remains are stored in Room 121 (Figure 77) of Repository 2. The floor is concrete, and the ceiling is constructed of wood with metal studs; ceiling insulation is exposed. Two walls are made of plasterboard, and two are constructed of cinder blocks. There are no windows within the collections storage area. Two sets of interior doors are made of wooden panels. A receiving-and-loading dock is present in the newer wing. The collections storage area is 70 percent full.

Environmental Controls

An electric, forced-air heater is the only environmental control present. The targeted temperature is 55°F, but a note on the wall gave directions to lower this for weekends. The humidity is neither monitored nor controlled. No dust filters are present. This was especially evident with the collections near the exterior door, which bear an excessive buildup of dust. Nonfiltered fluorescent lights are the only source of light in this area. The collections storage area is not regularly maintained.

Pest Management

A contracted pest-management company provides monthly services. Traps are used for monitoring pest infestations. Pest-control methods are employed. Unidentified dead insects were observed during the site visit.

Security

Doors to the artifact collections storage area are locked, but a key has been left outside with a note to firefighters. There are no windows. A garage door provides limited access to the building

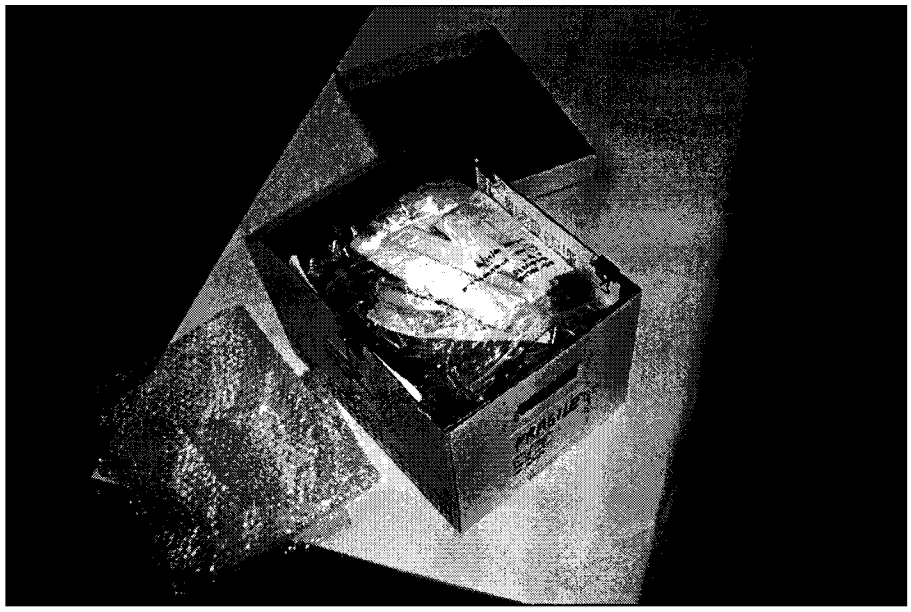

Figure 77. Secondary containers at NSM Repository 2 include plastic bags, bubble wrap, and paper towels.

for loading. An intrusion alarm on the exterior door is wired to the police station. A chain-link fence with barbed wire surrounds the facility, and the gate is equipped with a padlock. No unauthorized entries to the facility have been reported.

Fire Detection and Suppression

A key has been left outside the interior collections room door with a note to firefighters. The facility is equipped with a fire-suppression sprinkler system and an alarm linked to the fire department. A heat sensor serves as one means of fire detection, and manual fire alarms are also present. One fire extinguisher is located in the artifact collections storage area, near the entrance to the second room, and was last inspected on October 1, 1993.

Artifact Storage

Storage Units

Storage units include both wood and metal open shelving. Federal collections were stored on open metal shelving units with five shelves (see Table 12).

Primary Containers

Primary containers include acidic-cardboard boxes, one with a folded telescoping lid and the other with a glued-and-folded flap lid.

Secondary Containers

Secondary containers include newspaper, cotton batting, 2-mil plastic bags, bubble wrap, 2-mil zip-lock bags, and paper towels.

Laboratory Processing and Labeling

Artifacts have been cleaned and are labeled in india ink. Human skeletal remains have not been cleaned; a portion of the collection has been labeled directly with india ink, without a protective coating.

Human Skeletal Remains

Human skeletal remains were assessed only at this repository. A minimum number of three individuals is stored here in two boxes (~2 ft^3). The human skeletal remains have not been cleaned, and only a portion of the collection has been labeled. A portion of these remains was interred in the Fallon crypt on May 16, 1977.

Records Storage

Most types of records present at NSM are stored in this repository, as part of the information-center activities.

Paper Records

Site records and duplicates of associated documentation are stored in this repository.

Photographic Records

No photographic records were observed during the site visit.

Maps and Oversized Documents

Topographic maps, to which site and corresponding report information have been added, are housed in this repository. No oversized documents were observed during the site visit.

Project Reports

Project reports are housed in this repository.

Assessment of Both Repositories

Collections-Management Standards

Registration Procedures

Accession Files

All materials are accessioned upon receipt.

Location Identification

The locations of artifacts within storage areas is identified in the accession files and in the computer database.

Cross-Indexed Files

Files are cross indexed.

Published Guide to Collections

No guide to the collections has been published.

Site-Record Administration

The Smithsonian trinomial site-numbering system is used.

Computerized Database Management

Dansie uses a computerized database-management system for managing the ethnographic and archeological collections. Programs too big for disks are backed up onto two or three different hard drives and disks, which are stored in the museum vault. Backups are made after any change is made to the database. At least one backup is stored at Dansie's home. Backup disks are also kept in a vault in Repository 1.

Written Policies and Procedures

Minimum Standards for Acceptance

Minimum standards for the acceptance of archeological materials consist of compliance with field-curation guidelines, which will be outlined in the curation policy. Minimum standards for the acceptance of documentation include the inclusion of a catalog of the collections, two copies of the report, and the site records.

Curation Policy

No written policy was in place at the time of the site visit. A curation policy is being written.

Records-Management Policy

No written records-management policy is in place.

Field-Curation Procedures

Field-curation guidelines will be included in the curation policy. These guidelines include providing an inventory and catalog cards of the artifacts. The artifacts must be labeled, placed in 2-mil or thicker bags, and stored in a 1-ft^3 or 2-ft^3, standard-sized box.

Loan Policy

The loan policy includes a museumwide written loan form for researchers or other museums that contains a facility and security review, proof of insurance, and date of return of the loaned materials. Federally owned materials will not be loaned unless permission is granted by the

responsible federal agency. None of these loan procedures has been formalized in a policy statement.

Deaccessioning Policy

A formal deaccessioning policy allows the curator of the collection to present a deaccessioning request to the board. The board then votes. Federally owned collections will not be deaccessioned unless the responsible federal agency gives its approval.

Inventory Policy

No inventory policy is in place.

Latest Collection Inventory

The latest collection inventory occurred when the human skeletal remains were moved to Repository 2.

Curation Personnel

Curation personnel include Don Tuohy, curator of anthropology; Amy Dansie, staff anthropologist acting as collections manager; and a part-time curation assistant, Sue Anne Monteleone.

Curation Financing

Curation of the collections is financed in several ways. A curation fee funds the cultural resource management collection. Funds are included in the annual state budget for salaries, building maintenance, and supplies. A BLM curation contract of $10,000 funds any work associated with BLM collections.

Access to Collections

Collections are accessible to researchers and Native Americans through the approval of Dansie. In order to obtain access to a collection, a written request and explanation must be sent two weeks prior to the desired appointment date and must be approved by Dansie.

Future Plans

Future plans include creating a comprehensive plan for curation that addresses improving the storage space, creating a curation agreement, linking all information systems on the computers, and updating the accession ledger.

Comments

1. Appropriate environmental, security, and fire-safety controls are not utilized.

2. Several written management controls and procedures are missing.

3. Associated documentation has not been duplicated.

4. Storage units are constructed of uncoated wood, which poses the potential of outgassing and damaging the collections.

5. Storage units are not adequately secured to prevent theft.

Recommendations

1. Create a maintenance schedule for Repository 2.

2. Install an HVAC system to monitor humidity and control temperature and humidity. Install dust-filtration systems in both repositories.

3. Take corrective actions to prevent water leakage in Repository 2.

4. Develop an inventory policy.

5. Construct a structurally sound wall behind the cabinets in Repository 1, which would remove a potential security problem.

6. Place an easily accessible fire extinguisher in the records storage area of Repository 2.

7. Remove the key that is outside Repository 2.

8. Develop an emergency-management plan.

9. Replace uncoated-wood cabinets with baked-enamel, metal cabinets that have key locks and are lined with archival foam, which are able to hold greater volumes of artifacts.

10. Add extra packaging if necessary, using acid-free, buffered tissue paper or a similar material.

11. Duplicate all records onto acid-free paper or microfilm, and store these in a separate, fire-proof, secure location.

12. Interior labels made from spun-bonded, poly-ethylene paper (e.g., Nalgene polypaper) should be labeled in indelible ink and inserted into poly-ethylene bags.

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RMW Paleo Associates

Mission Viejo, California

Repository Summary

Volume of Artifact Collections: None

Collection Origin: NCBC Port Hueneme and NAWS Point Mugu

Compliance Status: No artifact collections were assessed.

Linear Feet of Documentation: < 1 linear foot

Compliance Status: All associated documentation will require complete rehabilitation to comply with current federal guidelines and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: Funding is obtained through contracts and curation fees.

Date of Visit: July 15, 1994

Point of Contact: Ron Bissel, archeologist/owner

RMW Paleo Associates (RMW) is a private company that employs three full-time archeologists, two full-time paleontologists, three full-time office staff, and one part-time archeologist. RMW has done several projects for EFA West and EFA Southwest. No federal artifact collections or human skeletal remains are stored at this facility. Records pertaining to the EFA West facilities of NCBC Port Hueneme and NAWS Point Mugu, are stored at RMW.

Assessment

RMW (Figure 78) is located in Mission Viejo Commerce Park, a light-industry and small-business complex . Activity areas at RMW include offices, a reception area, a records-study area, a processing lab, a collections storage area, and an equipment-storage area.

Structural Adequacy

The structure was built approximately 12 years ago. The foundation is a concrete slab. Exterior, load-bearing walls are concrete and steel, with aluminum risers. Interior walls are aluminum and plasterboard. The roof is flat, and made of built-up tar paper. The roof and foundation appear structurally sound; no cracks or leaks are apparent. The one-story building is above ground. There have been no external renovations. Known internal renovations include the removal of two walls to consolidate three spaces into one. One rest room was removed during this work, which was done for the previous occupants.

Figure 78. Exterior view of the light industrial building that houses RMW.

Environmental Controls

The front of the building is glass. The windows and their frames are original to the structure. These permanently sealed windows have venetian blinds. The aluminum frames did not show any signs of leakage. The office space where the records are kept has temperature controls. The heating system is gas-forced air. The warehouse area, in which the artifact and fossil collections are kept, does not have environmental controls. Humidity is neither monitored nor controlled. The environmental controls for the office space are equipped with dust filters. No hazardous materials are used; no special ventilation system is in place. Utilities include plumbing, electrical, and heating systems that are original to the structure. Support facilities include rest rooms, telephone lines, air-conditioning, and running water for processing artifacts.

Pest Management

A janitor cleans the building weekly. No pest-infestation problems have occurred. No monitoring or control practices are in place. No signs of infestation were observed during the site visit.

Security

Dead-bolt locks on exterior doors provide security. Access to the office and collections storage areas is controlled by staff members. No evidence of unauthorized entry was detected or has ever been reported.

Fire Detection and Suppression

No fire-detection system is in place. RMW maintains three or four fire extinguishers, most of which are located in the warehouse storage area. The structure is constructed of fire-retardant materials.

Artifact Storage

No artifacts from naval shore installations are being curated at this facility.

Laboratory Processing and Labeling

Because no artifacts from naval shore installations are being curated at RMW, laboratory processing and labeling were not assessed by the St. Louis District team.

Human Skeletal Remains

No human skeletal remains are present in the federal collection housed at RMW.

Records Storage

All associated documentation has recently been inventoried and is readily accessed. Files are arranged into two basic categories: active files and inactive files (Figure 79). Within each file type, documentation is filed in alphabetical order by client name, then project number. Each project number has four digits; the first two digits are the number of the project starting at the beginning of each year, and the last two digits are the last two numbers of the corresponding calendar year.

Navy records include administrative files regarding projects on Port Hueneme and Point Mugu.

Paper Records

Paper records are stored in acidic-paper files within metal, letter-size filing cabinets. Contaminants such as paper clips and staples were noted.

Photographic Records

No photographic records associated with naval shore installations were observed during the site visit.

Maps and Oversized Documents

No maps or oversized documents associated with naval shore installations were observed during the site visit.

Reports

Reports associated with projects on Port Hueneme and Point Mugu are being stored.

Collections-Management Standards

RMW does not view itself as a public curation facility. However, the company does curate collections they have accumulated through their own contractual work and are currently charging yearly curation fees.

Figure 79. Inactive archeological files at RMW are stored in acidic-cardboard boxes on metal and wooden shelves.

Registration Procedures

Accession Files

No formal accession records are kept.

Location Identification

An informal list contains the number of the site that the federal collection is from and the number of boxes associated with the collection. The physical location of the collection is not indicated.

Cross-Indexed Files

Files are not cross-indexed.

Published Guide to Collections

No guide to the collections has been published.

Site-Record Administration

A trinomial site-numbering system is used.

Computerized Database Management

A computerized database-management system is used for managing the collections.

Written Policies and Procedures

Minimum Standards for Acceptance

No minimum standards for the acceptance of collections have been formalized. The only collections at RMW are those associated with RMW projects; these are stored temporarily.

Curation Policy

No formal curation policy is in place; collections are stored temporarily.

Records-Management Policy

Records-management policies include a check-out system with a sign-out sheet for associated records, making duplicates of final-report invoices and memos, and sending copies to the appropriate information centers in California. Files are eventually purged; only duplicates are removed. Information from dirty field maps is transferred to clean replacement maps.

Field-Curation Procedures

No formal field-curation procedures have been produced. However, informal guidelines include using 4-mil, zip-lock bags labeled directly with a permanent marker and using cushioning to protect stacked artifacts.

Loan Policy

No loan policy has been established.

Deaccessioning Policy

No deaccessioning policy has been established.

Inventory Policy

No inventory policy has been established.

Latest Collection Inventory

Documents were inventoried just prior to the assessment.

Curation Personnel

Curation personnel and RMW owners include Joan Brown, Ken Becker, and Ron Bissel.

Curation Financing

Curation is financed in several ways; some curation costs are included in the RMW budget, some are included in project contracts, and the city and county of San Diego pay a small yearly fee for curation of their collections. Current proposals will include yearly fees for curation.

Access to Collections

Access to collections is controlled by RMW staff. The entire staff has access to the collections. Any researcher may use the collections.

Future Plans

Future plans include developing a policy to charge clients for additional curation costs incurred over initial budgeted funds and documenting informal policies and procedures.

Comments

1. The environmental controls, fire-detection system, and security system at RMW are inadequate.

2. There is no integrated pest-management policy.

3. Associated records have not been duplicated.

4. Standardized written policies and procedures have not been developed.

Recommendations

1. Install a sprinkler system and an environmental-control system that include monitoring and control of the temperature and humidity.

2. Develop and implement an emergency-management plan.

3. Reconnect motion detectors present in the building.

4. Develop a pest-management plan which includes monitoring and control.

5. Document informal policies and procedures.

6. Produce duplicates of records, on acid-free paper, and store these in a separate, fire-proof, secure location.

7. Develop a finding aid for associated documentation.

8. Place original documentation in acid-free file folders.

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San Diego Museum of Man

San Diego, California

Repository Summary

Volume of Artifact Collections: 55 ft^3

Collection Origin: OLF San Nicolas Island and San Miguel Island

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

Linear Feet of Records: < 1 linear foot

Compliance Status: Associated documentation will require complete rehabilitation to comply with current federal guidelines and modern archival-preservation standards.

Human Skeletal Remains: 53 ft^3

Status of Curation Funding: Curation is financed through the SDMM. Significant additional funding will be required to perform collections rehabilitation to comply with existing federal guidelines and modern archival-preservation standards.

Date of Visit: October 27, 1993

Point of Contact: Ken Hedges, chief curator

A total of 108 ft^3 of archeological collections is curated at SDMM, including 55 ft^3 of artifacts and 53 ft^3 of human skeletal remains. Less than 1 linear foot of associated documentation is stored at this facility. The inspection team physically examined 49 ft^3 (~90%) of the artifact collections. Human skeletal remains were briefly examined to ascertain the nature of primary and secondary containers being used and laboratory-processing methods. The collections and associated documentation were generated by Malcolm Rogers in 1930 and 1938. OLF San Nicolas Island became the property and responsibility of the U.S. Navy in 1933. It is recommended that research be performed to ascertain which portions of the collections were recovered after 1933. These are the artifacts, records, and human skeletal remains for which the Navy is responsible. See Table 13 for a summary of the types and percentages of material classes present in all of the collection.

Assessment

Archeological collections from OLF San Nicolas and San Miguel Islands are stored in museum laboratories 2, 5, and 6. These laboratories will be referred to as Collections Storage Areas 1, 2, and 3, respectively. The structure housing SDMM was built in 1915 as part of the World's Fair. The building has been adequately maintained through the years and doubtless received numerous minor modifications.

Table 13. Summary of Material Classes Present in the San Nicolas and San Miguel Islands Collections at the SDMM, by Percentage

Material Class	%
Lithics	43
Human remains[a]	6
Faunal remains	29
Shell	18
Asphaltum	2
Other[b]	2
Total	100

Note: Percentages based on total ft^3 of materials in the collection.
[a] Does not include the 53 ft^3 of human remains curated separately in Collections Storage Area 3, Laboratory 6.
[b] "Other" includes red ochre, ash, cordage, wood, soil, and historical-period ceramics.

Structural Adequacy

The foundation of the structure is constructed of reinforced, poured-concrete pillars and cross-members. The walls are constructed of hollow bricks covered with stucco, and the roof is asphalt and tile. The roof has been repaired and renovated through the years on an as-needed basis. There are two floors above ground and two floors below.

The plumbing and heating systems are original to the structure, which was built in 1915. The heating system is currently being replaced. The electrical system was replaced as needed over the last 10 years.

Collections Storage Area 1

This area is used for collections storage, associated documentation storage, and general curation work space. This collections storage area encompasses approximately 1,200 ft^2. It has a concrete-slab floor, insulated plasterboard walls, and a dropped, acoustical-tile ceiling. There are no windows. Entrance from the main museum to Collections Storage Area 1 is gained through a solid-core, wooden door. There are no interior doors. Heating and cooling duct work is on the ceiling.

Collections Storage Area 2

This area is used for storage of larger artifacts, level-bag materials, and soil samples. It is located in the subbasement of the museum, and encompasses approximately 865 ft^2. Entry is gained by going through Laboratory 4 and down a flight of steps to the lowest basement of the building. Collections are stored on metal shelving units located throughout the laboratory, with aisles approximately 4 feet wide between the units. Additional storage for large ground-stone artifacts is in an adjacent room on boards placed on the dirt floor.

In the early 1980s, the original dirt floor of Collections Storage Area 2 was replaced with poured concrete. Poured-concrete walls were also added at that time. There are no windows. The two doors in this collections storage area lead to Laboratory 4 and to the exterior of the museum. There are exposed cast-iron pipes along one wall.

Collections Storage Area 3

Human skeletal remains are curated in Collections Storage Area 3, which is located above Collections Storage Area 1. This collections storage area encompasses approximately 800 ft^2 and has a concrete-slab floor, insulated plasterboard walls, and an acoustical-tile ceiling. Collections Storage Area 3 has four windows, one of which is permanently sealed.

Environmental Controls

Collections Storage Area 1

This collections storage area has a central heating and air-conditioning system that monitors and controls the temperature to 68–70°F. There are dust filters on the heating and cooling registers. Humidity levels are monitored. The museum is expanding its HVAC system to include this collections storage area. Lighting is accomplished by fluorescent tubes with ultraviolet filters. There is no running water in this collections storage area, which is maintained by janitorial staff on an as-needed basis.

Collections Storage Area 2

Temperature and humidity levels are monitored, but not controlled. No heating or cooling systems are present. Lighting is provided by nonfiltered fluorescent tubes; there are no windows. There are exposed cast-iron pipes along one wall, one of which shows evidence of previous water leakage. These pipes are the remnants of a dismantled heating system and are no longer connected to any water source. There is no running water in this collections storage area. Janitorial staff maintain the area on an as-needed basis.

Collections Storage Area 3

A central heating and air-conditioning system, which monitors and controls the temperature to 68–70°F, is present. There are no dust filters on the heating and cooling registers. Humidity levels are monitored, but not controlled. The museum is now expanding its HVAC system to include this collections storage area. Lighting is provided by nonfiltered fluorescent tubes and natural light. This collections storage area is maintained by the janitorial staff on an as-needed basis.

Pest Management

An integrated pest-management program is in place at this facility. Pest-management methods used include monthly spraying of the museum and an on-call policy for specific problems. Organic materials are routinely fumigated before they are brought into the museum building.

Security

Intrusion alarms wired to the police and security offices are on all exterior doors to the facility, including the collections storage areas. Access to all collections storage areas is limited; access is controlled by museum staff. All doors have keyed dead-bolt locks, except the door to Collections Storage Area 3, which has a keyed padlock. Collections Storage Area 2 has a locked, steel fire door leading to the exterior of the museum. There are no windows in Collections Storage Areas 1 and 2. Collections Storage Area 3 has four windows, one of which is permanently sealed. Bars have been placed over the other three windows. All four windows are locked, and connected to an alarm system. Windows are accessible by ladder only. There is no evidence of unauthorized access through doors or windows and there have been no past episodes of unauthorized entry into any of the collections storage areas.

Fire Detection and Suppression

Fire-detection systems for the entire repository, including the collections storage areas, consist of heat sensors and smoke detectors that are wired to the fire department. Fire-suppression systems for the collections storage areas consist of fire extinguishers. There are no sprinkler systems in any of the collections storage areas. Fire inspections are conducted annually.

Artifact Storage

Storage Units

Collections Storage Area 1

Artifacts are curated in custom-made wooden-drawer units (Figure 80) of various sizes, which were donated to the museum by a local department store. Approximately 34 ft^3 of OLF San Nicolas and San Miguel Islands collections are curated in 46 drawers. Stamped, adhesive labels listing the drawer number have been placed on all drawers. Acidic-paper tags with site numbers on them have been placed in metal label holders on the drawers.

Collections Storage Area 2

Large artifacts, level bags, and soil samples are stored here. These are stored on enameled-steel shelving units with sealed-chipboard shelves (Figure 81), each of which measures 6 x 10 x 4 feet (w x h x d). Fifteen boxes (15 ft^3) of cultural materials from OLF San Nicolas and San Miguel Islands are curated on these shelves. Shelving units are labeled with adhesive, vinyl shelf numbers and adhesive tape bearing the collection name in marker.

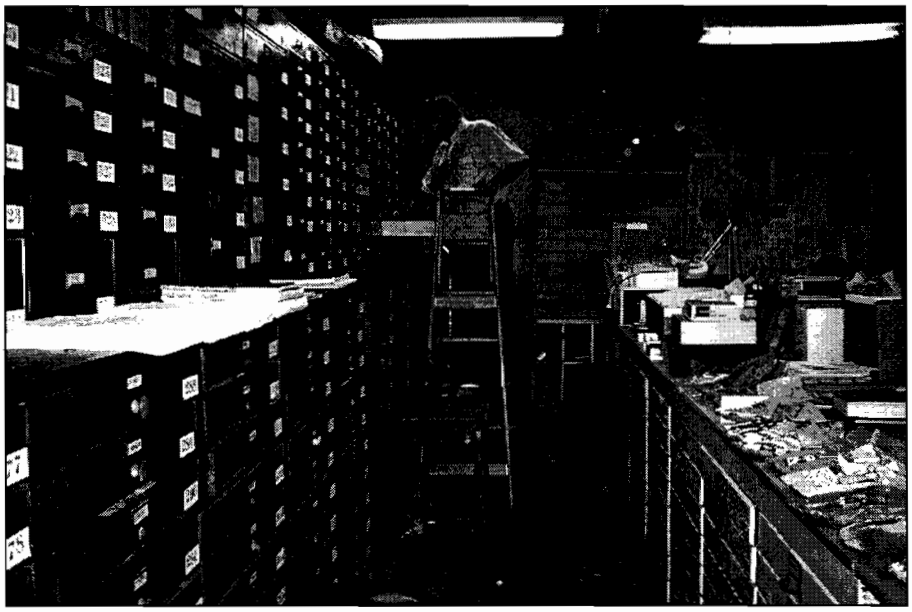

Figure 80. Archeological materials in SDMM Collections Storage Area 1 are housed in wooden drawers.

Figure 81. Enameled metal shelving units in Collections Storage Area 2 house larger artifacts, level bags, and soil samples at the SDMM.

Collections Storage Area 3

A total of 53 ft^3 of human skeletal remains is curated here. These are stored in adjustable, enameled-metal shelving units that measure approximately 4 x 12 x 1 foot (w x h x d). These shelving units, installed in the 1980s, are arranged along the walls of this collections storage area. Human skeletal remains recovered from OLF San Nicolas and San Miguel Islands are stored on one shelving unit in this collections storage area. Shelving units are not labeled.

Primary Containers

Collections Storage Area 1

Unlined, wooden drawers serve as primary containers for artifacts recovered from OLF San Nicolas and San Miguel Islands. The exteriors of these drawers have been varnished. Adhesive paper labels stamped with the drawer number are stapled to the fronts of the drawers. Acidic-paper tags bearing provenience information have been inserted into the drawers' metal label holders.

Collections Storage Area 2

Many of the large artifacts are stored loose on shelving units; other large artifacts, level bags, and soil samples are curated in acidic-cardboard boxes stacked two high. The boxes exhibit discoloration, slight compression from stacking, and some tearing. Boxes are labeled directly with marker; labels indicate Rogers's site numbers or catalog numbers. Artifacts curated on shelves without primary containers were not physically examined by the inspection team, but total approximately 6 ft^3.

Collections Storage Area 3

Human skeletal remains are curated in oversized, acidic-cardboard boxes. Boxes are labeled with acidic-paper tags taped to the ends of the boxes with information written in marker. Labels indicate catalog numbers and provenience.

Secondary Containers

Collections Storage Area 1

Secondary containers holding the cultural materials recovered from OLF San Nicolas and San Miguel Islands include acidic-cardboard boxes and trays (83%), loose storage in primary container (10%), vials (4%), plastic trays (2%), and other (1%). Other includes plastic bags, plastic box lids, tissue paper, and a wooden cigar box. When present, secondary containers are labeled with pen or pencil on acidic-paper inserts.

Collections Storage Area 2

Secondary containers for the collections stored in this collections storage area were not assessed by the St. Louis District team.

Collections Storage Area 3

Secondary containers used to curate human skeletal remains include tissue paper, plastic bags, open-faced, acidic-cardboard boxes, and plastic vials. Most of the secondary containers are not labeled; when labels are present they consist of pen, pencil, or marker written directly on the containers. Label information includes site, catalog, and burial numbers, and date.

Laboratory Processing and Labeling

Most artifacts (90%) and other cultural materials have been cleaned and individually labeled. Labeled artifacts have Rogers's site numbers applied directly on their surfaces in india ink. Those not individually labeled are stored in secondary containers with paper-tag labels enclosed. These labels are written in ink or pencil. Labels are legible and consistent. Artifacts (Figure 82) and other cultural materials are sorted by provenience; approximately 50 percent are broken down further into material classes within each drawer.

Human Skeletal Remains

There are approximately 120 catalog entries for human skeletal remains and associated funerary objects from OLF San Nicolas and San Miguel Islands. A minimum number of at least 121 individuals from OLF San Nicolas Island and 1 individual from San Miguel Island is being curated at SDMM, in Collections Storage Area 3. Cremations are curated with artifacts and other cultural materials in Collections Storage Area 1. The human skeletal remains located in Collections

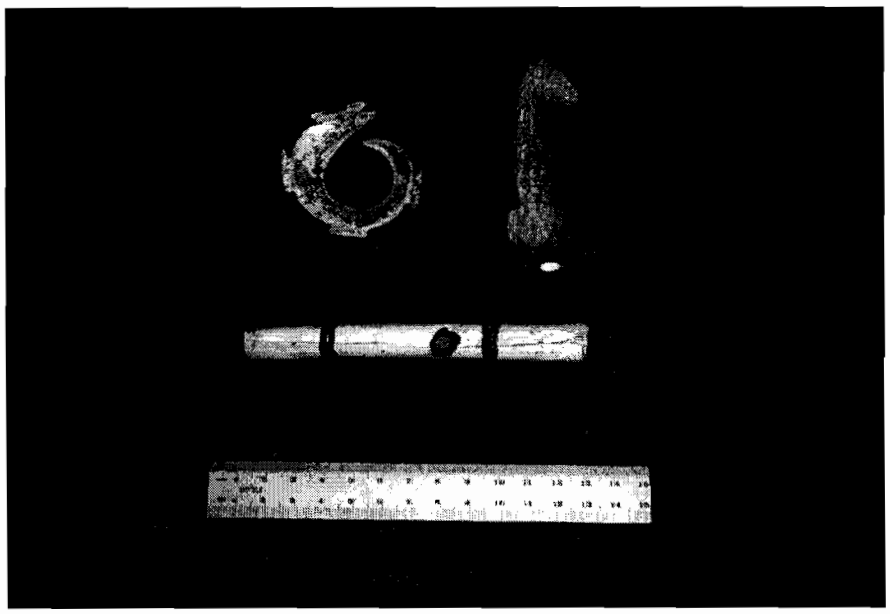

Figure 82. A fishhook, pelican effigy, and bone whistle are examples of the San Nicolas and San Miguel Islands artifacts that are being housed at the SDMM.

Storage Area 3 were not examined on an individual basis, but general methods of curation and storage were noted.

Records Storage

Less than 1 linear foot of associated archeological documentation regarding OLF San Nicolas and San Miguel Islands is curated in Collections Storage Area 1. All documentation is accounted for, readily accessed, and sorted by site number. Records maintenance and security are the responsibility of curatorial staff, who also control access. There is no check-out system for associated documentation, but the museum will provide photocopies of documents upon request. No associated documentation is excluded from curation, and no records are known to have been lost. Associated documentation has not been copied on acid-free paper, but the collection has been microfilmed. There is an organized file for contract reports submitted to the museum.

Paper Records

Paper records associated with collections recovered from OLF San Nicolas Island consist of approximately 1 inch of artifact inventory sheets and one field notebook, which are curated in acidic-paper file folders. A photocopy of the field notebook is available for use by researchers and staff. Files are stored in a standard, four-drawer metal filing cabinet located in Collections Storage Area 1. The drawers of the file cabinet have metal label holders with acidic-paper inserts labeled in marker. Each label states the site number series located in the drawer it is on. Four inches of artifact cards (3 x 5 inch and 5 x 8 inch) were laying on a table for inspection by the St. Louis District team. The cards were removed from a metal card-file unit. Information on the cards is legible, but the cards are soiled around the edges and slightly discolored from repeated use.

Paper records associated with collections recovered from San Miguel Island consist of inventory sheets (< 1 inch) and one map, which are curated in acidic-paper file folders. The file folders are curated in a filing cabinet with the OLF San Nicolas Island records. The records are in good condition, but show some discoloration and are becoming brittle. The folders are labeled in pencil with Rogers's site numbers. A finding aid for the documentation collection is located on top of the file cabinet.

Photographic Records

Photographic records associated with OLF San Nicolas Island consist of approximately 2 inches of negatives and black-and-white prints curated in standard 5-x-7-inch photograph envelopes. Photographic records associated with San Miguel Island consist of less than 1 inch of black-and-white prints and negatives curated in two standard 5-x-7-inch envelopes. These envelopes, labeled directly in pencil with Rogers's site numbers, are stored in a wooden filing cabinet in Collections Storage Area 1 constructed to hold 5-x-7-inch materials. Envelopes and negative sleeves are nonarchival. The museum has an ongoing program of replacing all negative sleeves and storage envelopes with archivally appropriate materials. Drawers in the file cabinet have metal label holders, which contain an acidic-paper card with the site number series of the contents, written in marker. Photographs and negatives are in good condition but should be archivally curated. There is a finding aid for the documentation collection, but not specifically for the photographic materials.

Maps and Oversized Documents

One map showing archeological sites on San Miguel Island is folded and curated with the paper and photographic records (see above). There is one oversized map of archeological sites on OLF San Nicolas Island which was located on one of the tables in Collections Storage Area 1. It is presumably stored in the wooden drawers of the standard, wooden map storage unit located against one wall of Collections Storage Area 1.

Reports

No project reports were assessed by the St. Louis District team, but there is an organized file for contract reports submitted to the museum.

Collections-Management Standards

Registration Procedures

Accession Files

Collections and associated documentation are accessioned upon receipt and updated by the registrar.

Location Identification

Locations of the collections at SDMM are identified in museum location records.

Cross-Indexed Files

Files are cross-indexed by catalog number, site number, cultural affiliation, and accession date.

Published Guide to Collections

No guide to the collections has been published.

Site-Record Administration

SDMM uses its own system of site-record administration. They do not use the trinomial site-numbering system that is widely used in California. It would be a difficult task to apply trinomials to collections such as those from OLF San Nicolas Island, because Rogers's site designations encompass larger areas and their locations are less precise than those designations made in the 1950s and later, when comprehensive surveys of the island were performed by Kritzman, Rozaire, and others.

Computerized Database Management

SDMM staff are currently entering information concerning human remains and associated funerary objects onto a computerized database to be produced for the NAGPRA summary. The specific computer program being used is a WordPerfect merge file structure for eventual transfer to a database program.

Written Policies and Procedures

SDMM revised and published its *Collections Policy* in 1991. This document addresses policies and procedures for acceptance, evaluation, accessioning and deaccessioning of collections, access to collections, and loans. The museum is currently writing policies and procedures for NAGPRA.

Minimum Standards for Acceptance

Conditions of acceptance are stated in the written collections policy. Conditions for acceptance state that SDMM cannot accept specimens on which restrictions are placed and which would prevent effective research examination, normal exhibition use, loan, or disposal. The museum cannot accept specimens on conditions that require they be placed on long-term exhibition, or that the collection to which they belong be kept together permanently and be displayed only as a discrete collection. The museum is no longer accepting archeological collections.

Curation Policy

The written collections policy addresses acquisition of collections, evaluation of materials, accessioning and deaccessioning, transfer, loans, and accessibility of collections and records.

Records-Management Policy

Records management is not specifically addressed in any written policy.

Field-Curation Procedures

Because archeological collections are no longer accepted, there are no written field-curation guidelines for researchers depositing collections.

Loan Policy

SDMM has a written loan policy that is presented in their collections policy. All loans must be approved by the director and materials can only be loaned to institutions engaged in educational or scientific pursuits. No loans to individuals are made. The registrar maintains a record of all loans.

Deaccessioning Policy

The museum has a written deaccessioning policy within its collections policy. Deaccessioning requires the recommendations of the chief curator or registrar and the approval of the director and the board of trustees. Types of deaccessioning discussed include gifts of specimens to appropriate scientific, educational, or cultural institutions, exchanges of specimens between two or more institutions to increase the probability of preserving materials, and sales of materials if certain specimens or collections are no longer required for research and exhibition. A record of all deaccessioned items is kept.

Inventory Policy

There is no formal inventory policy.

Latest Collection Inventory

The collections were last formally inventoried in the 1970s. Collections are inventoried as they are used. Collections recovered from OLF San Nicolas Island were inventoried in 1975 (sites SN-1 to SN-26w, SN-29a, SN-30, and SN-31a), 1984 (sites SN-27, SN-32, and SN-misc. Drawers 607–611), and 1993 (sites SN-28 to SN-29 and SN-31).

Curation Personnel

Chief curator, Ken Hedges, is a full-time curator of California ethnography and archeology and also has administrative/publications duties; Grace Johnson is a full-time curator of Latin America ethnography and administers the archeological records search program; Rose Tyson is a full-time curator of physical anthropology; Dr. Alana Cordy-Collins is a part-time consulting curator for Latin America archeology; and Cheryl Jeffrey is a full-time assistant curator for Southwest ethnography and archeology.

Curation Financing

Financing for archeological curation is included as a line item in the SDMM operating budget. The funding level for curation is considered adequate by curation personnel, but the present needs assessment suggests that this funding level does not meet the mandated curation requirements for federally owned collections.

Access to Collections

Access to the collections is controlled by curatorial personnel, but museum and security staff have keys to the collections storage areas. The collections storage areas are open to individuals with legitimate research needs, by appointment. All requests must be project specific.

Future Plans

Future plans for upgrading the curation program include achieving status as a regional repository,

upgrading storage facilities (e.g., metal cabinets), and computerizing data.

Comments

1. The museum's funding is currently inadequate to curate archeological collections in accordance with federal guidelines.

2. Collections are secure from fire and theft, but environmental conditions must be improved in Collections Storage Areas 2 and 3.

3. The registration of artifacts and other cultural materials is adequate, but computerization would allow easier retrieval of information.

4. The use of the museum's own site-record administration system rather than the standard trinomial system leads to complications for outside users.

5. Collections storage areas have reached full capacity.

6. An integrated pest-management system has been implemented at this facility.

7. Primary and secondary containers do not meet federal standards.

8. Storage of associated documentation does not meet modern archival-preservation standards.

9. Human skeletal remains, artifacts, and faunal remains are not all individually cataloged.

10. Human skeletal remains are mixed with artifacts and faunal remains in Collections Storage Area 1.

11. Locating oversized ground-stone artifacts in Collections Storage Area 2 is difficult.

12. There is no written inventory policy for this facility.

Recommendations

1. Acquire funding to curate federally owned archeological collections according to federal guidelines.

2. Install an HVAC system to control temperature and humidity, and install a dust-filtration system throughout the entire repository. Place ultraviolet filters on all light sources in collections and documents storage areas.

3. Inventory all collections; any artifacts and associated records identified as missing should be recovered and reintegrated into the collections.

4. Enter information on all archeological specimens and associated documentation into a computerized database for easier retrieval of information.

5. Provide more dedicated space for the storage of artifact and records collections.

6. Rehabilitate archeological collections according to federal guidelines. This includes replacing secondary containers with 4-mil, zip-lock, polyethylene bags, and labeling these with indelible ink. Labels for secondary containers should be made from spun-bonded, polyethylene paper (e.g., Nalgene polypaper), labeled in indelible ink, and inserted into the secondary containers.

7. Replace primary containers with acid-free cardboard boxes. Apply adhesive, polyethylene label holders, with acid-free paper inserts, to the boxes. Labels should no longer be applied directly to the boxes. When label information or box contents change, inserts can be replaced, thus reducing the chance for conflicting and confusing information.

8. Primary containers should be placed on secure, enameled-metal shelving units.

9. Identify all human skeletal remains, associated and unassociated funerary objects, sacred objects, and objects of cultural patrimony and

determine their final disposition in accordance with NAGPRA stipulations. The human skeletal remains currently being stored in drawers with artifacts in Collections Storage Area 1 should be removed and curated with the remains in Collections Storage Area 3. Hire an assistant to analyze the bone in these drawers and separate the human bone from the faunal remains.

10. Locate all OLF San Nicolas and San Miguel Islands oversized ground-stone artifacts and store in one area within Collections Storage Area 2.

11. Arrange associated documentation according to modern archival-preservation standards.

12. Remove all contaminants from original documentation.

13. Duplicate all paper records onto acid-free paper, and place the copies in acid-free folders labeled in indelible ink. Place all folders in acid-free cardboard boxes, and apply adhesive, polyethylene label holders with acid-free paper inserts to the boxes.

14. Store duplicates of all associated documentation in a separate, fireproof, secure location.

15. Place all photographic materials in archival, polypropylene sleeves, and place sleeves in an acid-free, three-ring binder. Photograph logs should be on acid-free paper in indelible ink.

16. Place photographic records in a stable environment that has humidity and temperature monitoring and control devices.

17. Place oversized maps in flat map-storage cases for long-term curation.

18. Rehabilitate associated documentation and store in environmentally safe enclosures.

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Santa Barbara Museum of Natural History

Santa Barbara, California

Repository Summary

Volume of Artifact Collections: 55.5 ft^3

Collection Origin: OLF San Nicolas Island and San Miguel Island

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

Linear Feet of Records: 1.3 linear feet

Compliance Status: Associated records will require partial rehabilitation to comply with current federal guidelines and modern archival-preservation standards.

Human Skeletal Remains: 14 ft^3

Human skeletal remains of a minimum of 47 individuals are stored at this facility. Human skeletal remains of a minimum of 15 individuals were collected on San Miguel Island, and a minimum of 32 individuals is from San Nicolas Island.

Status of Curation Funding: Curation has been financed through the museum's annual operating budget. Curation funding has been supplemented by grant awards and curation fees.

Date of Visit: December 2 and 6, 1993

Point of Contact: John Johnson, curator of anthropology

SBMNH curates artifacts, associated documentation, and human skeletal remains that were recovered from the Navy's San Nicolas and San Miguel Islands. Most of the collection was acquired by David Banks Rogers in the late 1920s and Phil Orr in the early 1940s. It is recommended that further research be performed to ascertain the legal ownership of these collections and determine which portions of the collections are the responsibility of the Navy.

Collections from San Nicolas and San Miguel Islands are stored in two separate repositories.

The anthropology offices, lab, and collections storage rooms are located within a complex of buildings belonging to the museum (Repository 1). Artifacts on exhibit are located in a separate building, Gould Indian Hall (Repository 2). This complex of buildings is located in close proximity to the historic Santa Barbara Mission.

Assessment of Repository 1

Repository 1, the Collections and Research Center (Figure 83), houses the anthropology section and two other scientific sections, each with their own air-handling units. The anthropology area in Repository 1 contains offices, a rest room, a

Figure 83. Exterior view of the Collections and Research Center, Repository 1, at SBMNH.

collections holding area, a laboratory, a state-of-the-art collections storage area, a photographic-records storage room, and a storage room for human skeletal remains. Three collections storage areas were assessed at Repository 1: Collections Storage Area 1, Archaeological and Ethnographic Storage; Collections Storage Area 2, Records and Maps Storage and Lab; and Collections Storage Area 3, Photo Archives.

Structural Adequacy

Repository 1, a single-story structure, was originally constructed in 1962. This repository was completely remodeled in 1991–1992, after consultation with a conservator. The foundation is concrete, and the interior and exterior walls are concrete block. Replaced during the remodeling, the roof is of rolled roofing tar, sealed with hot tar, under clay tiles.

Collections Storage Area 1

This collections storage area is the largest room in the anthropology section, measuring 2,450 ft^2. The collections stored here are approximately 50 percent archeological and 50 percent ethnographic. The collections storage area is filled to approximately 80 percent capacity.

This structure has a concrete floor, concrete-block interior walls, and a plasterboard ceiling. There are no windows. Three metal doors are located on the south wall, each leading to adjacent rooms. The east door leads to the anthropology lab, the center door leads to the storage area for human skeletal remains, and the west door leads to the artifact-holding area. Functional overhead pipes are present in this storage area as required by local codes for fire protection, but no evidence of past failures was observed by the St. Louis District team during the site visit.

Collections Storage Area 2

This area has the same structural qualities as Collections Storage Area 1. These rooms are adjacent to each other within the same building. This room contains file cabinets, map cases, and shelves for records storage. Counters, desks, and work tables are also located in this area. The south and east exterior walls contain windows coated with ultraviolet filtering film. Metal doors in this area lead to the artifact-holding area, the collections storage room, the photo-archive room, two offices, a rest room, and the outside of the building. The area containing file cabinets and work tables narrows and then opens into a vestibule on the west side of the room. This section of the storage area houses map cases.

Collections Storage Area 3

This area has the same structural qualities as Collections Storage Areas 1 and 2. These rooms are adjacent to each other within the same building. Collections Storage Area 3 has one door that opens directly into the map-storage area of Collections Storage Area 2. This collections storage area contains counters, chairs, shelves, and small storage units for the storage and study of photographs and slides.

Environmental Controls

Although the Repository 1 collections storage areas are located in the same building, environmental controls differ among the rooms.

Collections Storage Area 1

An HVAC system controls temperature and humidity. The targeted temperature is 67°F, and the targeted humidity level is 54 percent. Relative humidity is monitored by hygrothermographs and a hygrometer. Some of the hygrothermographs are located inside the storage cabinets. The HVAC system has a dust-filtration system. Lighting is provided by nonfiltered fluorescent tubes over enclosed cabinets. Fluorescent lighting is equipped with ultraviolet filters over work areas. Staff regularly maintain the storage room.

Collections Storage Area 2

Windows are present in two walls. Temperature controls include a central air-conditioning system and a central, forced-air heating system. Humidity is monitored in this area by a recording hygrothermograph. Records have shown very little humidity fluctuation in this room. Light sources are filtered.

Collections Storage Area 3

No windows are present; lighting is provided by filtered fluorescent tubes. Temperature and humidity controls are the same as those used in Collections Storage Areas 1 and 2.

Pest Management

An integrated pest-management system was developed by a pest-control consultant who was funded through an Institute for Museum Services (IMS) grant. However, pest-infestations are periodically monitored through the placement of sticky traps near doorways. The St. Louis District team noted the presence of spiders in many of the traps. The perimeter baseboards in all collections rooms, laboratories, and offices are sprayed quarterly with residual insecticide, which kills insects that break the polymer bead by walking across the sprayed surface. All perishable items are frozen upon receipt, before being integrated into the collections, to kill any pests.

Security

Security measures for Repository 1 include an intrusion alarm, access controlled by staff, the employment of a contracted security company, dead-bolt lock, key lock, and window locks. Alarms on both exterior doors are wired to the contracted security company and are activated during nonworking hours in Collections Storage Area 1. The security company must be called, and a code must be entered in order for the staff to work late or on weekends. All doors are steel, with dead-bolt locks. The interior door has a separate key. Keys to the anthropology section are given only to the executive director, anthropology staff, and the heads of the two other scientific departments located in the same building. The storage cabinets within this collections storage room are locked, and the keys are only available to anthropology staff.

Security measures in Collections Storage Area 2 include an intrusion alarm on the windows and door, a key lock on the entrance door, a motion detector on the ceiling, access controlled by staff, and window locks. Windows are accessible from the ground, but no unauthorized access of the facility has been reported.

Fire Detection and Suppression

There are several fire-detection and -suppression systems installed throughout Repository 1.

Table 14. Summary of Material Classes Present in the San Nicolas and San Miguel Islands Collections at SBMNH, by Percentage

Material Class[a]	%
Ceramics	1
Lithics	43
Faunal remains	25
Shell	19
Botanical	1
Soil	2
^{14}C	2
Asphaltum	5
Other[b]	2
Total	100

[a] Human skeletal remains are omitted from this table, because they are not curated with the artifact collections.
[b] "Other" includes textiles and beads.

However, they differ among the collections storage areas.

Collections Storage Area 1

The only fire-detection system present consists of multiple heat sensors located throughout the storage room. Fire-suppression systems present include a sprinkler system, a fire extinguisher, and fire-retardant doors that have a 1.5-hour fire-protection rating. Artifacts are stored in sealed, inflammable metal cabinets that are designed to shed water if the sprinkler system is activated.

Collections Storage Area 2

Fire-detection systems include a manual fire alarm and a heat sensor. Fire-suppression equipment present includes a sprinkler system and two fire extinguishers. One extinguisher is located near the exterior door, and the other is located near the map-storage case; both were last inspected in February 1993.

Collections Storage Area 3

Fire-detection and -suppression equipment present within this collections storage area consists of a heat sensor and sprinkler head.

Artifact Storage

Artifacts in Repository 1 are stored in Collections Storage Area 1. Refer to Table 14 for a summary of material classes present in the collections recovered from San Nicolas and San Miguel Islands. Major prehistoric material classes represent include lithics, faunal remains, and shell.

Storage Units

Artifacts curated in Collections Storage Area 1 are stored in state-of-the-art, key-locked Delta Design cabinets (Figure 84). These cabinets are sealed, filtered, have sliding gaskets, and have been placed on movable space-saving tracks. Oversized ground-stone artifacts are stored on open metal shelving units.

Primary Containers

Primary containers for the artifact collections in Repository 1 are the drawers of the Delta Design cabinets. These have been lined with acid-free foam lining. Labels are temporary, since the items are undergoing a complete inventory and have not yet been placed in their permanent locations.

Secondary Containers

Secondary containers for the artifact collections in Repository 1 include acidic-cardboard trays lined with ethafoam (66%), loose storage (24%), and plastic bags (10%). The preceding summary of secondary containers does not include percentages of secondary containers utilized for the curation of human skeletal remains. Most of the boxes have not been labeled.

Laboratory Processing and Labeling

All artifacts have been cleaned. The artifacts have been labeled according to the numbering system that was employed by the previous owner or past curator. Artifact labeling varies

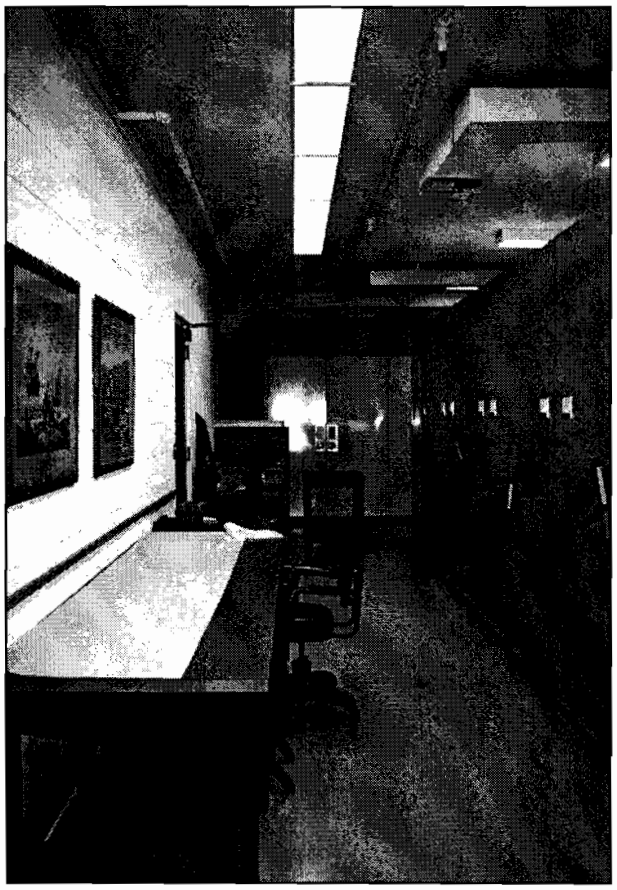

Figure 84. Artifacts curated in Collections Storage Area 1 of Repository 1 are housed in state-of-the-art, key-locked, Delta Design metal cabinets.

from adhesive, acidic-paper labels to labels written directly on the artifact in india ink (Figure 85).

Human Skeletal Remains

Approximately 14 ft^3 of human skeletal remains are stored in Collections Storage Area 1, a small storage room within Repository 1. A minimum of 47 individuals is stored at this facility. Human skeletal remains of a minimum of 15 individuals were collected on San Miguel Island, and a minimum of 32 individuals was collected on San Nicolas Island.

The room contains Delta Design cabinets with a magnetic-closing system. Human skeletal remains are wrapped and cushioned with acid-free tissue, then placed in acid-free boxes with telescoping lids that are stored on shelves within the cabinets.

Records Storage

Associated records are stored in Collections Storage Areas 2 and 3.

Paper Records

Associated paper records in Collections Storage Area 2 are stored in metal filing cabinets. Bound

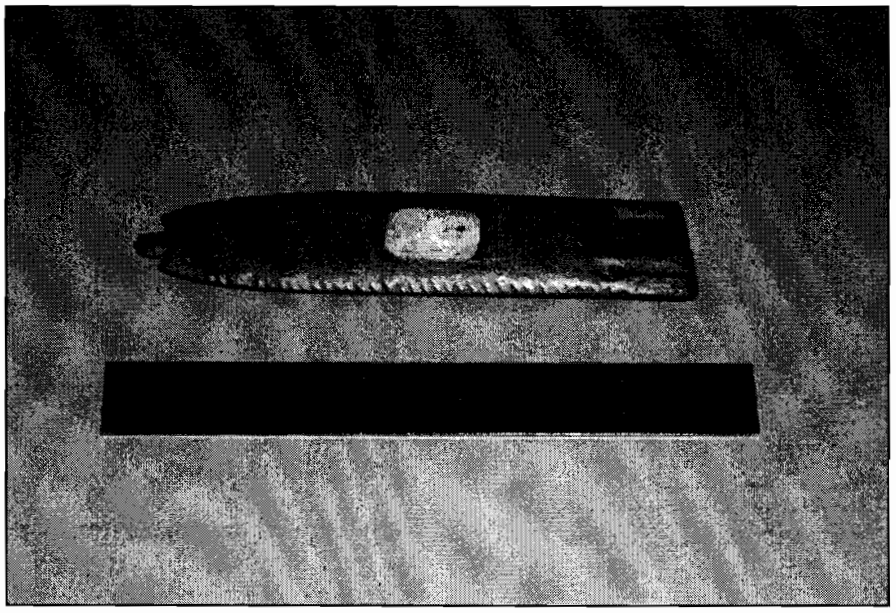

Figure 85. Some artifact labels at the SBMNH have been directly applied with india ink.

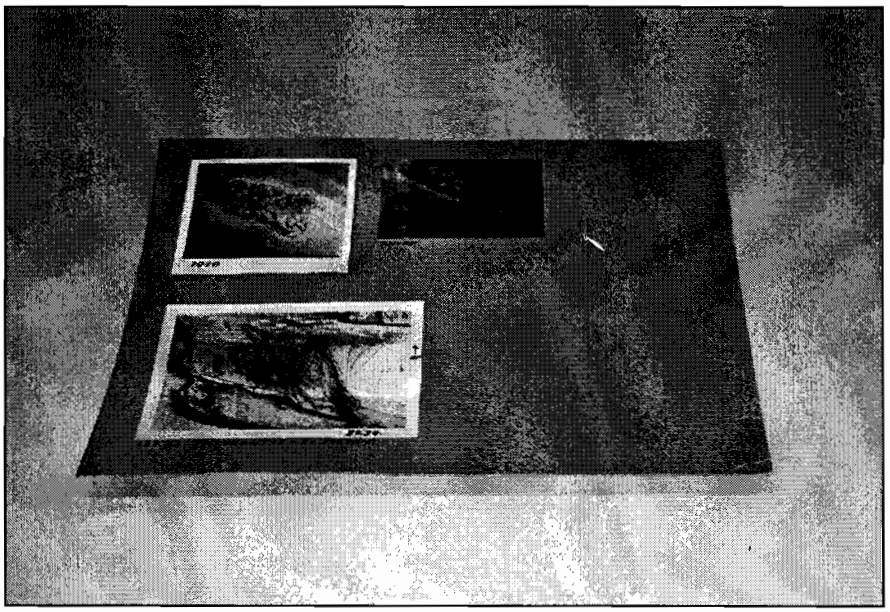

Figure 86. Some photographs from San Nicolas Island in Repository 1 have been glued to acidic paper.

materials are stored on open shelving. Paper records consist mainly of accession records.

The museum recently received unsorted personal papers belonging to Orr; these are stored in an acidic box on the floor of Collections Storage Area 3. The contents of Orr's personal papers were not assessed.

Photographic Records

Photographic records (Figure 86) are stored in files in Collections Storage Areas 2 and 3.

Maps and Oversized Documents

At the time of the assessment, maps were stored in Collections Storage Area 2, in an old, flat, wooden map case (Figure 87).

Reports

No reports associated with collections from naval shore installations are stored at this facility.

Audiovisual Records

Audiovisual records are stored in Collections Storage Area 3. A film about San Nicolas Island, produced by Phil Orr, is stored with his records in this area.

Assessment of Repository 2

Repository 2, Gould Indian Hall, contains permanent displays. Only one collections storage area was assessed in Repository 2.

Structural Adequacy

Repository 2, a single-story structure built in the 1930s, was completely remodeled in 1963. This repository measures approximately 1,620 ft^2, and has a concrete foundation, concrete-block interior and exterior walls, and a clay-tiled roof. Permanent wood-and-glass exhibit cases line the walls. The current exhibit was installed in the 1970s. An Institute of Museum Services grant provided funds for updating the electrical system.

Environmental Controls

Pest Management

No integrated pest-management system is in place for Repository 2. All perishable items are frozen upon receipt, before being integrated with the collections, to kill any pests present.

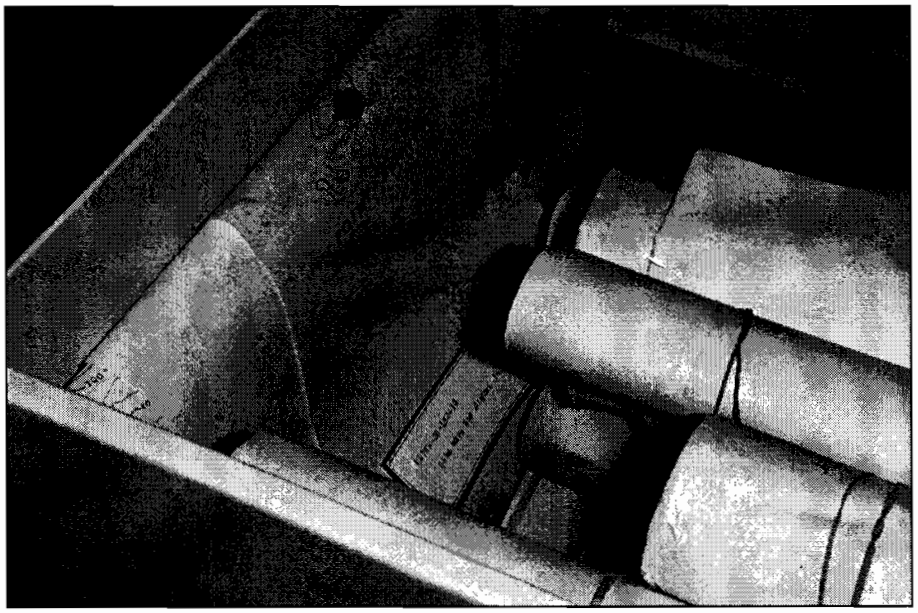

Figure 87. Maps from San Nicolas and San Miguel Islands are stored in a metal drawer in Repository 1.

Security

Security measures for this repository include motion detectors, dead-bolt and key locks, and access controlled by staff. An alarm system is installed on all exhibit cases. The alarm is activated by breaking the glass or opening the cases. An alarm on the exterior doors is wired to a private security company. A security guard is present on the museum grounds in the evenings and on weekend.

Fire Detection and Suppression

Fire-detection systems present include fire alarms wired directly to the fire department, smoke and heat sensors, and fire extinguishers.

Artifact Storage

A portion of the federal collections at the museum are stored in this repository.

Storage Units

Artifacts are stored in old, permanent display cases constructed of wood and newly installed safety glass.

Primary Containers

Artifacts do not have primary containers.

Secondary Containers

Artifacts do not have secondary containers.

Laboratory Processing and Labeling

All artifacts have been cleaned. The artifacts have been labeled with the numbering-system that was employed by the previous owner or past curator. Artifact labeling varies from adhesive, acidic-paper labels to labels written directly on the artifact in india ink.

Human Skeletal Remains

No human skeletal remains from naval shore facilities are being curated in Repository 2. Refer to the assessment of Repository 1, above, for a discussion of human skeletal remains from San Nicolas and San Miguel Islands.

Assessment of Both Repositories

Collections-Management Standards

Registration Procedures

Accession Files

Artifacts are accessioned upon receipt.

Location Identification

Artifact locations are identified in the ARGUS computerized database system currently being integrated at this facility. The recent acquisition of new storage cabinets has made the old locations obsolete.

Cross-Indexed Files

Files are cross-indexed.

Published Guide to Collections

No guide to the collections has been published.

Site-Record Administration

A trinomial site-numbering system is employed when possible. Most of the collections bear their previous owners' identification systems or one of the systems employed by past curators.

Computerized Database Management

The ARGUS database system has been introduced and staff at the museum are currently in the process of entering collections data. The storage, loan, conservation, and exhibit history of each object will be included in the database.

Written Policies and Procedures

Minimum Standards for Acceptance

Collections are accepted on the basis of region. Collections from south-central California are of the highest priority; second priority is given collections from other areas in California, and third priority is given to collections from western North America.

Curation Policy

Curation policies include responsibilities for ethical handling, accessioning, documentation, appraisals and identifications of objects, and deaccessioning, loaning, inventorying, insurance, and accessibility of collections.

Records-Management Policy

Records-management policies are included in the curation policy.

Field-Curation Procedures

Guidelines require that the artifacts be cataloged using the museum's system. Artifacts and any large items must be appropriately labeled with provenience information in india ink, with a protective coating, unless analyses requiring an unaltered surface will be performed. Multiple items, such as debitage or assemblages of tiny items, can be given a single catalog number and labeled with an acid-free tag. Secondary containers must be 4-mil, polyethylene bags. The museum must be provided with an inventory listing the objects and catalog numbers, including a hard copy and a copy on computer disk. The donors must provide funding for the transfer of this information into the museum's database. All archival boxes must be labeled in sequence and a description of the organizing criteria of the collection must be given. Copies of any associated documentation must be supplied on acid-free paper. Any photos, slides, or negatives must also be included and be placed in archival packaging. Materials such as fire-affected rock or large quantities of shell are not accepted unless special circumstances apply.

Loan Policy

Loan forms must be completed when any objects are transferred or loaned. The conditions of the loan are outlined in the loan agreement which is approved by the curator of the appropriate department. The assistant curator inspects the loan files yearly and notifies the responsible individuals of any overdue loans. The loan history of each object is available on the ARGUS database.

Deaccessioning Policy

Deaccessioning policies are addressed in the curation policy. The loan form is used when deaccessioning an item. Only objects owned by the museum can be deaccessioned. Generally, the only items deaccessioned are transferred items (from one department to another for hands-on use), exchanged items (items not of high priority in collections at the museum can be traded to other museums in order to obtain high-priority materials), nonartifacts, and unprovenienced items placed on exhibit. The curator is empowered to approve deaccessions when objects are under a certain monetary value; deaccessioning of objects over a certain monetary value must be approved by the board of trustees.

Inventory Policy

Past inventories were conducted by taking a random sample of catalog cards and checking artifact locations. Collections are being inventoried as information is put into the new ARGUS database system. The inventory policy after integration of the database has not yet been established.

Latest Collection Inventory

The latest random inventory was in 1990. Collections are currently undergoing a complete inventory as artifact information is entered onto the computer database.

Curation Personnel

Curation personnel includes John Johnson, curator of anthropology, three permanent staff members, two temporary curatorial assistants, several interns, and approximately 12 volunteers.

Curation Financing

Curation is financed through the annual operating budget of the museum. Equipment is financed through grants and curation fees.

Access to Collections

Access to collections is approved for researchers with legitimate interests. Collections are removed from the storage area and studied in the lab. One exception is the study of human skeletal remains, which is done on a study table within the main collections area.

Future Plans

Future plans include integrating the ARGUS computer database, publishing guides to document the collections, cataloging the photograph collections, duplicating all documentation, cataloging the remainder of the artifact collection, and replacing nonarchival storage containers with archival plastic bags and acid-free foam.

Comments

1. Collections Storage Area 1 utilizes space well and employs some of the best curation equipment available.

2. Several numbering systems, imposed by past collectors and curation staff, are in use.

3. Maps, showing signs of damage, are rolled up and sacked in drawers of map cases. Adhesive, acidic-paper labels have been used, as have rubber bands that deteriorate, disintegrate, and often become sticky and damage whatever is near.

4. Some acidic storage boxes have been overstuffed with artifacts.

5. Old film is stored in a wooden cabinet.

Recommendations

1. Install an HVAC system that monitors and controls temperature and humidity levels in all collections storage areas and is equipped with a dust-filtration system.

2. Place ultraviolet filters on all light sources in the collections and records storage rooms.

3. Implement a professional pest-management system that includes regular monitoring and control.

4. Artifacts labeled with old systems should be integrated into the current accession number system, labeled in indelible ink with the new

numbers, and sealed with a protective coating. The old numbers should not be removed.

5. Replace the old, wooden map case with new, baked-enamel map cases. Maps should be unrolled and placed flat within the cases. Remove all contaminants from the maps.

6. Separate over packed boxes of lithics.

7. Remove all acidic boxes currently storing collections.

8. If consolidation of collections becomes necessary in the future, artifacts should be stored in acid-free boxes in 4-mil, zip-lock, polyethylene bags clearly labeled in indelible ink. Interior labels made from spun bonded, polyethylene paper (e.g., Nalgene polypaper) should be labeled in indelible ink and inserted into the polyethylene bags.

9. Insert a section within the curation policy addressing repatriation.

10. Remove all contaminants from associated documentation.

11. Duplicate all paper records on acid-free paper or microfilm and store in acid-free containers labeled with indelible ink. Place all folders in acid-free boxes and apply adhesive, polyethylene label holders, with acid-free inserts, to the boxes. Store copies in a separate, fireproof, secure location.

12. Photographic records should be stored in a stable environment that has humidity and temperature-monitoring and -control devices.

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Seattle Central Community College

Seattle, Washington

Repository Summary

Volume of Artifact Collections: 62 ft^3

Collection Origin: NAS Whidbey Island, Oak Harbor

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

Linear Feet of Records: 2.5 linear feet

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

Human Skeletal Remains: 13 ft^3

Status of Curation Funding: No funding for curation has been provided.

Collection Update (October 1997): Collections were moved from SCCC to Dr. Astrida Blukis Onat's company—BOAS, Inc.—where they await repatriation (Steve Pennix, NAS Whidbey, personal communication 1997). Recommendations 1 and 2 have been carried out.

Date of Visit: May 26–27, 1994

Point of Contact: Astrida R. Blukis Onat

Approximately 62 ft^3 of artifacts and 2.5 linear feet of associated documentation from site 45IS81 are stored at SCCC, in Seattle, Washington. Twelve sets of human skeletal remains (13 ft^3) are included in this collection for a total of 75 ft^3 of collections. After the site visit by the St. Louis District assessment team, 13 additional boxes of shell from site 45IS81 were discovered by Dr. Blukis Onat. This site is located on NAS Whidbey Island, Oak Harbor, Washington. It was excavated by Blukis Onat and her students over a period of three years in the early 1980s. Permission was granted by the Navy to excavate, but no financial support was given to Dr. Blukis Onat and her students. No report was ever produced. Refer to Table 15 for a summary of artifact material classes represented in this collection.

Assessment

The Navy collections are stored on the fourth floor of the Edison-Broadway Building on the campus of SCCC (Figure 88). The building is primarily used for classrooms and offices. A cafeteria and laboratories are also present. The collections storage room is the anthropology laboratory.

Table 15. Summary of Secondary Containers Present in the NAS Whidbey Island Collection at SCCC, by Percentage

Secondary Container	%
Paper bags	65
Aluminum foil	10
Newspaper	8
Plastic bags	8
Acidic-cardboard boxes	5
Loose material	2
Other[a]	2
Total	100

Note: Percentages based on total ft^3 of materials in the collection.
[a] "Other" includes cotton batting, plastic vials, and other plastic containers.

Structural Adequacy

The Broadway-Edison Building, in which SCCC is located, is a brick structure with a concrete foundation. The original structure was built in the 1940s, as the Edison Technical School. The current structure is the result of two major additions completed in 1972 and 1973. Since the additions, and the change in function from a technical school to a community college, the building encompasses approximately 440,000 ft^2 with five floors above ground and one below.

Environmental Controls

The structure's environment is controlled by a computerized HVAC System 24 hours per day. The system was installed in 1973 and has been periodically updated three or four times during the existence of the college. The system is part of a state-wide management system. The thermostat regulating building temperature is set at 73°F, and the relative humidity is kept at 60 percent. The HVAC system contains dust filters that are changed by maintenance staff in accordance with a computerized maintenance schedule.

Pest Management

The pest-control policy includes a complete deinfestation yearly. Cockroach strips, mouse strips, and rat traps are also employed. Most of these activities are conducted in designated storage areas within the structure; the anthropology lab is not included. A dead moth was observed in a primary container during the

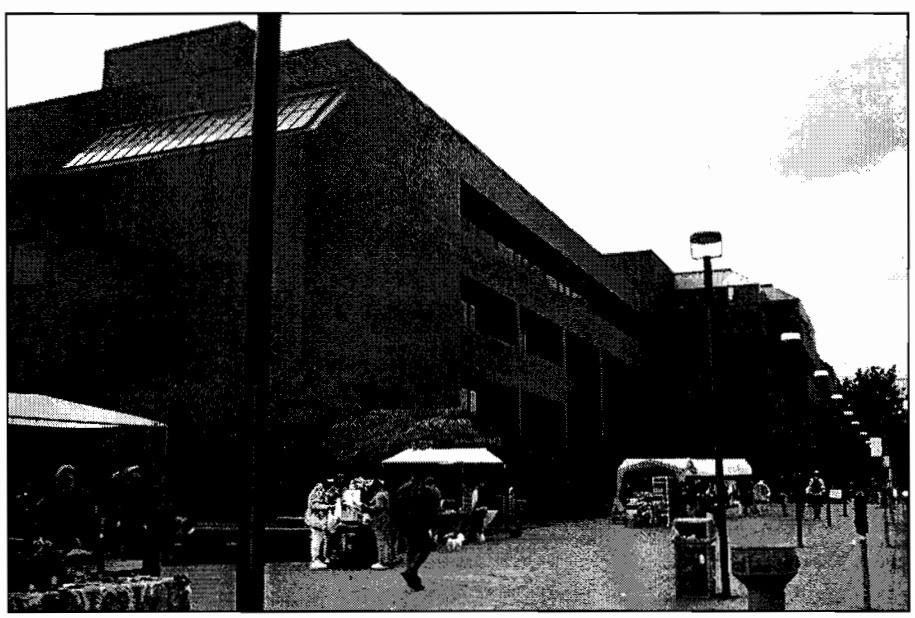

Figure 88. Exterior view of the Edison-Broadway Building on the SCCC campus.

site visit. Cockroaches have been a continuous problem, which is constantly monitored and controlled.

Security

Security measures for the building include a 24-hour, in-house guard and an infrared intrusion-alarm system that has sensors on all glass entrances and sound detectors placed in strategic locations throughout hallways. A maintenance person and a security person are always on 24-hour call via cellular phone. The building is locked from 10:00 p.m. to 7:00 a.m. and is closed on Sundays and holidays. Past incidents of unauthorized access have generally been individuals who have stayed in the building after business hours looking for shelter. The last incident of unauthorized entry occurred approximately one year ago. No unauthorized entrance into the anthropology lab has ever been reported.

Special security keys are used for the offices and laboratories. Only three people have access to keys for the anthropology lab. Individuals within the lab are only given access with the supervision of one of the key holders. The only individuals holding keys are Dr. Blukis Onat, another instructor who uses the lab, and the division chair, who has a master key. Janitors are admitted only upon the request of Dr. Blukis Onat; this does not occur on a regular basis. All of the numerous first floor windows are accessible from the outside, but are permanently sealed.

Fire Detection and Suppression

Fire-safety measures for the Edison-Broadway Building include wet-pipe sprinklers in each room and the hallways, manual fire alarms, fire doors, heat sensors, smoke detectors, and a limited supply of fire extinguishers. Interior doors are hollow, wood-paneled, and filled with fire-retardant materials.

Artifact Storage

Storage Units

Collections are stored on free-standing, adjustable shelving units that are 15 x 6 x 0.5 feet (w x h x d) (Figure 89). The units have baked-enamel, metal frames and pressboard shelves. The collections are stored on 20 shelves.

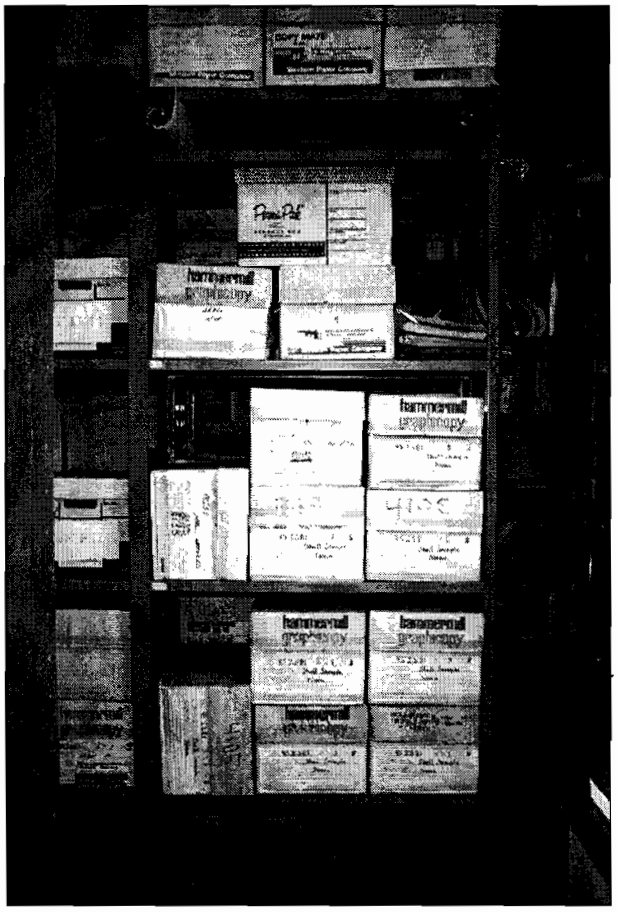

Figure 89. Primary containers at SCCC consist of acidic-cardboard boxes and storage units are baked-enamel metal shelves.

Primary Containers

Primary containers consist of standard-size, acidic storage boxes with telescoping lids (Figure 90). The boxes are glued and folded. Each box holds approximately 1 ft^3 of material. Damage to some of the boxes includes compression due to over packing and over stacking, and water stains from a leak in the laboratory above. Primary container labels are preprinted, acidic-paper tags, with information written in black marker, attached to the boxes with packing tape. Label information includes site and box numbers, a description of the contents, the provenience, the burial number, and the date of analysis (if applicable).

Secondary Containers

A variety of secondary containers are used, including paper bags (65%), aluminum foil (10%), newspaper (8%; see Figure 90), plastic bags (8%), acidic-cardboard boxes (5%), loose storage (2%), and other (2%). Other includes cotton batting, plastic vials, and other plastic containers. Approximately 25 percent of the boxes contain Styrofoam packing "peanuts."

Laboratory Processing and Labeling

A portion of the artifacts have been cleaned, and labeled with black ink on a white surface.

Human Skeletal Remains

The human skeletal remains of 12 individuals (13 ft^3) from the Maylor Point site, 45IS81, on NAS Whidbey Island are presently stored in the anthropology lab at SCCC.

Approximately 12 human burials were collected from one site during three summer field schools at Maylor Point. These are curated in at least 19 boxes. Preliminary analysis was done by a physical anthropologist, Beth Brandon, in the summer of 1985. Miscellaneous human-bone fragments and teeth are in two additional boxes that also contain artifacts and faunal remains.

Most of the human skeletal remains have been cleaned. None is labeled. Their present condition and state of preservation are good.

The site where the human skeletal remains were collected is part of the traditional territory of the Lower Skagit Valley Indian group, to which the current Swinomish tribe belongs. The age of the human skeletal remains is unknown.

Records Storage

Approximately 2.5 linear feet of documentation associated with the Maylor Point site is stored with the artifact collection on an adjustable metal shelving unit near other artifact collections. The majority of the documents are curated in two acidic boxes, and several inches are stacked on a shelf. Boxes are labeled, "records," in marker.

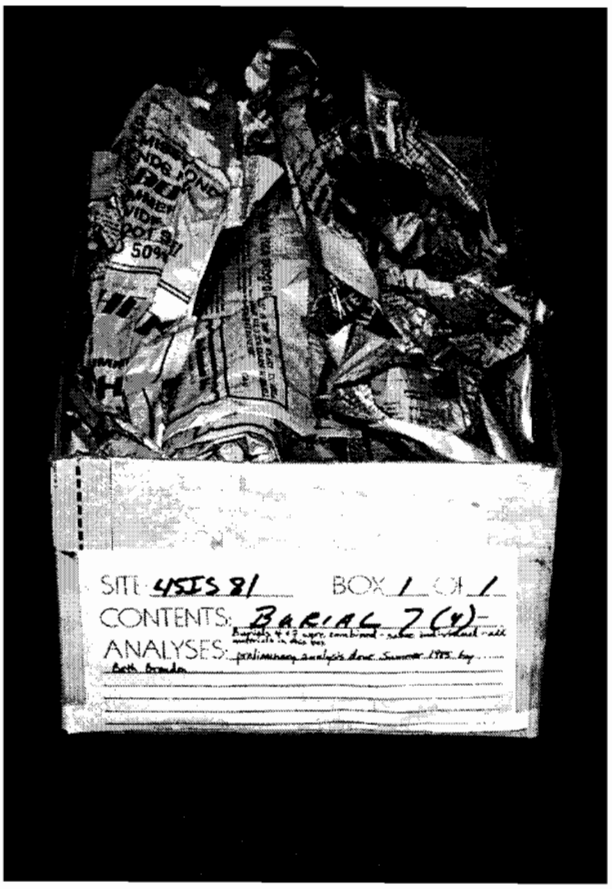

Figure 90. Some archeological materials at SCCC are wrapped in newspaper.

The boxes have a folded construction and telescoping lids. Secondary containers include manila folders, loose and bound materials, metal three-ring binders, nonarchival plastic photo sheets, and nonarchival envelopes for photos and negatives. No records have been archivally processed, no finding aids are available, no copies have been made, and no particular arrangement was apparent other than that it was all associated with to the site. The general appearance of the collection is good, but some of the newspapers are yellowed and brittle from age and water damage. Contaminants such as paper clips and staples were noted.

Paper Records

Paper records include administrative, background, survey, excavation, and analyses records. These include all of the hard-bound student field notebooks, drawings, newspaper

clippings, correspondence, burial forms, stratigraphy forms, feature forms, artifact inventories, and photographic logs.

Photographic Records

Photographic records include color prints, black and white prints and negatives, contact sheets, and color slides (set in plastic and cardboard frames). A small drawer of slides was brought in from Dr. Blukis Onat's home to be assessed.

Maps and Oversized Documents

Cartographic records include large and small maps, drawings, and blueprints. These are rolled up together and stored, without a container, on top of the documentation boxes.

Reports

The St. Louis District team did not observe any reports, associated with the federal site, in the documentation collection.

Collections-Management Standards

The SCCC anthropology laboratory does not consider itself a curation facility; therefore, collections-management standards will not be discussed in this report.

Curation Personnel

Dr. Blukis Onat is the only individual maintaining the collection. Numerous students have processed the materials, but there is not a full-time curator for the collections.

Curation Financing

No curation financing is available. The purchase of acidic boxes was the only contribution SCCC made to the curation of the collection.

Access to Collections

The collection has been accessible to students processing the artifacts. Interested Native Americans who have historically been linked to Whidbey Island have been given portions of the collection for use as teaching tools. They are also available to any legitimate researcher interested in analyzing the collection.

Update

Dr. Blukis Onat retired from SCCC in June 1995. Personnel at NAS Whidbey have been consulting with the Swinomish tribe, who want the collections excavated from Whidbey Island repatriated to their tribe. Whether their intentions for the human skeletal remains are reburial or storage is unclear. One option discussed was the storage of the collection at the nearby Skagit County Historical Museum, which has shown interest in working with the interested parties and becoming a repository for these collections. As of October 1997, the collection is being stored at Dr. Blukis Onat's company, BOAS, Inc. This was agreed to by NAS Whidbey because the Swinomish felt more comfortable with the collection being cared for by Dr. Blukis Onat rather than by the Navy. Another tribe, the Samish, has recently achieved federal recognition and is also interested in acquiring the collection.

Comments

1. The environmental controls are state-of-the-art and have been professionally maintained since receipt of the collection by the anthropology lab.

2. Damage has occurred to some of the loose paper records and to a number of the primary storage containers housing the artifact collections. This was due to the placement of a science lab with running water on the floor directly above the anthropology lab, which makes this an unsuitable location for the collections.

3. The security system is adequate.

4. The fire-detection system is adequate as a whole, but would be better if a fire extinguisher is placed within the room, rather than down the hall.

5. There is no institutional responsibility for the collections. Definite plans for the appropriate care of the collection must be finalized.

6. All artifacts are presently curated in acidic primary, secondary, and sometimes tertiary containers.

7. Documentation is not stored archivally, as documents in containers are within acidic packaging. Documentation stored on open shelves has sustained damage from the ceiling leak. Loose materials are deteriorating because of the poor storage conditions. Duplicates of the records have not been made.

8. After the site visit, Dr. Blukis Onat called to report that she had discovered 13 more boxes of shell from the NAS Whidbey Island site. They were not marked with the site number on the outside, but had the unit information. She said that their packaging was identical to the rest of the collection.

Recommendations

1. Identify all recovered associated and unassociated funerary objects , sacred objects, and objects of cultural patrimony, as defined by NAGPRA, and determine their disposition.

2. Analyze all human skeletal remains according to NAGPRA stipulations.

3. Move all collections to an environmentally controlled, secure building with adequate pest-management and fire-detection and -suppression systems.

4. If Recommendation 3 cannot be followed within the immediate future, implement the following minimal recommendations (5–11).

5. Duplicate all documentation, inventory the records, and store these materials in a separate, fireproof, secure location in acid-free containers.

6. Transfer all unprotected slides, negatives, and photographs to polyethylene sleeves.

7. Inventory and replace acidic-cardboard boxes with standard-size, acid-free, cardboard boxes. Replace secondary artifact containers with 4-mil, zip-lock, polyethylene bags, and label in indelible ink. Additionally, interior labels made from spun-bonded, polyethylene paper (e.g., Nalgene polypaper) should be labeled in indelible ink and inserted into the polyethylene bags.

8. Obtain all loaned artifacts and document their return.

9. Implement a reliable pest-maintenance system within the collections storage area that includes, but is not limited to, the use of attractants or baits.

10. Obtain a fire extinguisher for the anthropology laboratory and have it inspected yearly.

11. Develop an emergency-management plan.

43

Skagit County Historical Museum

La Conner, Washington

Date of Visit: May 26, 1994

Points of Contact: Jim Barmore, museum director, and Patricia L. Doran, curator of collections and registrar

The Skagit County Historical Museum (SCHM; Figure 91) was assessed because of their stated interest in exploring the opportunity of becoming a repository for the collections excavated from NAS Whidbey Island by Dr. Astrida R. Blukis Onat. Prior to the evaluation, museum staff had no knowledge of the contents and nature of the Navy collections. The collections consist of 75 ft^2 of archeological materials, including the human skeletal remains of at least 12 individuals. At the time of this assessment, the collection was stored in the anthropology laboratory of SCCC, in Seattle, Washington, in the office of Dr. Blukis Onat. The collection was moved to Dr. Blukis Onat's company, BOAS, Inc. upon her retirement in 1995.

Assessment

The 12,000-ft^2 structure was built by volunteers in 1967. In 1983, the east wing (Figure 92) and basement were added. The museum specializes in collecting and exhibiting displays related to the history of Skagit County. Procuring

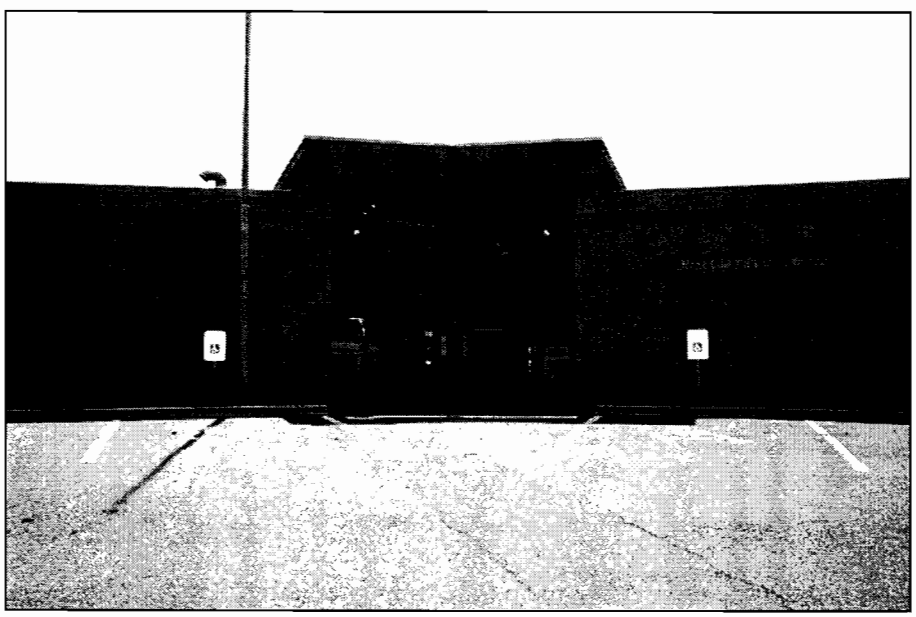

Figure 91. Exterior view of SCHM in La Conner, Washington.

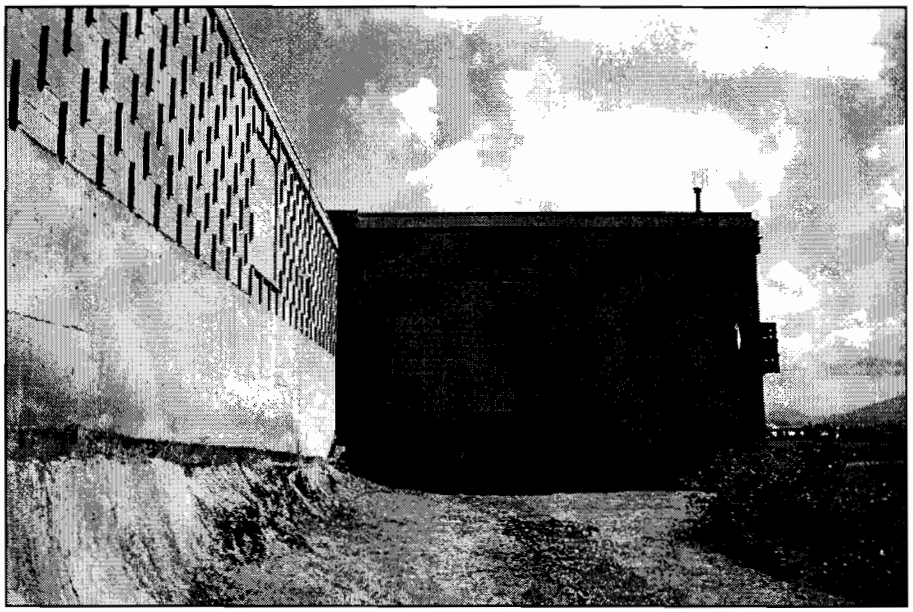

Figure 92. Exterior view of SCHM showing the east wing and loading dock and the original building with irregular foundation.

archeological collections has not been a part of their past mission, nor have they ever curated any human remains. During the site visit, renovations to an adjacent building recently acquired by the museum were taking place. Plans for the building included moving offices, paper record and artifact collections storage, and a meeting and workshop space and kitchen into the former house. This would have some effect on the storage capacity of the current museum building; however, an assessment can only evaluate a facility in its present state. A document describing the renovations to the new building and potential effects to the original facility was not available to the assessment team.

Present in the current museum structure are a gift shop, permanent and temporary exhibit areas, collections storage areas, a receiving and loading door, a mechanical and utility room, a rock room, and offices.

Structural Adequacy

The structure has a concrete foundation, and the exterior walls are concrete block. The roof is asphalt, sealed with tar, and was retarred in 1991. The structure serves as exhibit area, study room, collections facility, and office space. Built into an incline, the facility has a total of two floors, one above ground and one partially below, with basement entrances at the rear of the structure. Minor interior remodeling has taken place. The east wing wall is all windows. In the gallery, windows have curtains and solar screening. The aluminum-framed windows open at the bottom for ventilation. No evidence of any type of window leaks was observed during the site visit. The windows are original to the 1983 addition. Support utilities include heating, rest rooms, telephones, and electricity. The plumbing and electrical systems are original to each part of the building. The heating system was replaced in 1985.

The collections storage area (Figures 93 and 94), in the basement, has a concrete floor and interior walls are painted concrete blocks. The ceiling is plaster over plasterboard. The only way to enter the collections storage area is from the exterior. The collections are approximately 90 percent historical-period, 5 percent prehistoric, 3 percent ethnographic, and 2 percent paleontological and geological.

Environmental Controls

Temperature is controlled by a gas heating system. Humidity is neither monitored nor

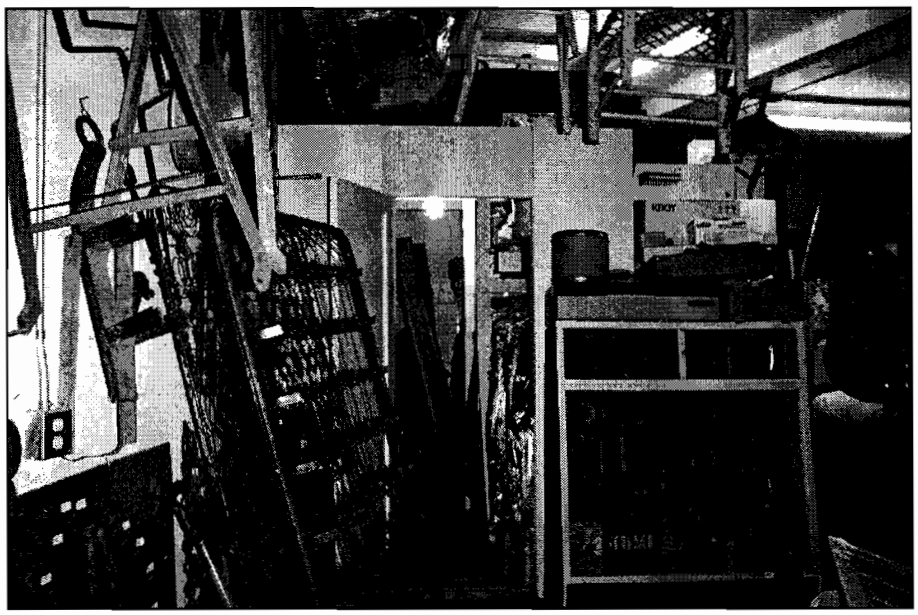

Figure 93. The SCHM collections storage area is in the basement.

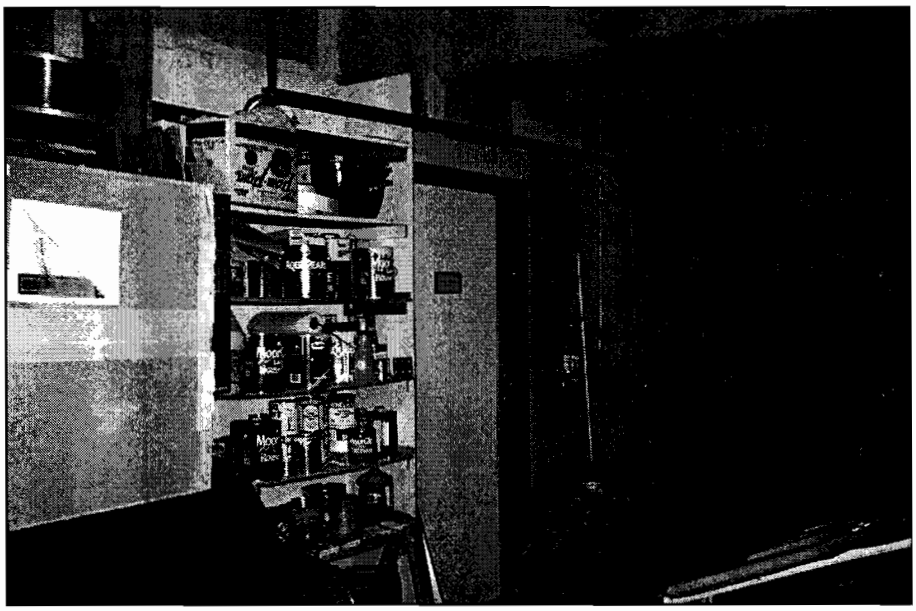

Figure 94. View of a portion of the collections storage area at SCHM.

controlled. The building is regularly maintained by the operations manager.

Pest Management

Pest management includes an annual fumigation by a contracted pest-control company. An integrated pest-management system is not employed. No signs of infestation were observed by the St. Louis District team.

Security

Security measures present include an intrusion alarm wired into the local police department and a contracted security company, key locks, motion detectors, a dead-bolt lock, controlled access, and window locks. The motion detectors are in three galleries and the lobby. Intrusion alarms are located on all exterior doors and two interior doors. Only the lobby windows are accessible from the outside.

Fire Detection and Suppression

Fire detection consists of manual fire alarms, which are connected to the fire department, and smoke detectors. Fire-suppression materials consists of fire extinguishers, fire doors, and concrete-block interior walls.

Collections-Management Standards

Registration Procedures

Accession Files

Collections are accessioned upon receipt.

Location Identification

The physical location of collections is identified in the accession records.

Cross-Indexed Files

Files are cross-indexed by donor and object names and provenience.

Published Guide to the Collections

No guide to the collections has been published.

Site-Record Administration

Site numbers have not been used at the museum. Most collections are historical period in nature.

Computerized Database Management

No system is currently in place. The museum plans to investigate the ARGUS system in 1995.

Written Policies and Procedures

Minimum Standards for Acceptance

An old minimum-standards-for-acceptance policy is currently being revised.

Curation Policy

No comprehensive plan for curation is in place. Informal policies are based on the knowledge and training of the staff.

Records-Management Policy

As of the date of this assessment, no written records-management policy is in place. However, museum personnel indicate that a draft policy may be completed in 1995.

Field-Curation Procedures

No field-curation guidelines are in place.

Loan Policy

A loan policy is in place.

Deaccessioning Policy

At the time of the assessment, no deaccessioning policy was in place. However, museum personnel indicate that a draft policy may be completed in 1995.

Inventory Policy

At the time of the assessment, no inventory policy had been established. However, museum personnel indicate that a draft policy may be completed in 1995.

Latest Collection Inventory

The date of the latest collection inventory is unknown.

Curation Personnel

Patricia Doran is the curator of collections and the registrar.

Curation Financing

Curation, including curation salaries, is financed through the Skagit County budget and private contributions. Funding is inadequate.

Access to Collections

Access to collections can be achieved through the librarian and the curator/registrar by appointment.

Future Plans

Plans include completing a collections-management policy, a collections plan, collections-management using a database system, completing renovation to the new building, and reorganizing space made available by transfer of items to the new building.

Comments

1. Adequate environmental controls are not present in the current structure. Plans for the renovation of the adjacent structure into a research library and collections facility were not available.

2. Adequate fire-safety and security measures are present.

3. An integrated pest-management system is not in place.

4. Lack of storage space has created excessive clutter, which leads to a potential for artifact damage and loss.

5. The museum lacks many written policies and procedures necessary for adequate management of the collections.

Recommendations

1. Install environmental controls that monitor and control temperature and humidity levels. Ensure that a dust-filtration system is used.

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

3. Ensure that adequate space is provided for the long-term care and maintenance of all collections.

4. Develop and implement necessary written management policies and procedures.

5. Develop an emergency-management plan.

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Southwest Museum

Highland Park, California

Repository Summary

Volume of Artifact Collection: 25 ft^3

Collection Origin: OLF San Nicolas Island and San Miguel Island

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

Linear Feet of Records: 1.6 linear feet

Compliance Status: Records will require complete rehabilitation to comply with current federal guidelines and modern archival-preservation standards.

Human Skeletal Remains: Approximately 25 ft^3 of human skeletal remains, a minimum number of at least 23 individuals, are curated at the Southwest Museum. Human skeletal remains were recovered from OLF San Nicolas and San Miguel Islands.

Status of Curation Funding: Curation is financed through the operating budget of the Southwest Museum.

Date of Visit: November 12, 1993, and July 14, 1994

Point of Contact: George Kritzman, curator of archeology

Approximately 25 ft^3 of artifacts, 25 ft^3 of human skeletal remains, and 1.6 linear feet of associated archeological documentation from OLF San Nicolas and San Miguel Islands are curated at the Southwest Museum, Los Angeles, California. The majority of the collection (76%) was physically examined by the St. Louis District assessment team. Refer to Table 16 for a summary of material classes examined.

Human skeletal remains of at least 23 individuals are included in this collection. These remains were recovered during archeological investigations on San Nicolas Island ca. 1900, 1926, 1960, 1977, and 1984. All of these remains were physically examined by the St. Louis District team. Artifacts and human skeletal remains are curated in one collections area at the Southwest Museum.

Assessment

The Southwest Museum is located in Highland Park, California, a municipality in the greater Los Angeles area. The collections storage room is located in the museum's Caracol Tower (Figure 95). A mezzanine level within the tower provides additional storage space. The collections storage room encompasses approximately 1,050 ft^2.

Table 16.
Summary of Material Classes Present in the San Nicolas and San Miguel Islands Collections at the Southwest Museum, by Percentage

Material Class	San Nicolas (%)	San Miguel (%)	Both Collections (%)
Prehistoric			
Lithics	57	79	62
Faunal remains	11	4	10
Shell	9	14	12
^{14}C	5	—	4
Basketry	3	—	2
Textiles	11	—	8
Other[a]	2	1	1
Historical-period[b]	2	2	1
Total	100	100	100

Note: Percentages based on total ft^3 of materials in the collection.
[a] Prehistoric "Other" includes asphaltum, botanicals, charcoal, root casts, and metal.
[b] Historical-period "Other" includes ceramics, glass, metal, and leather.

Figure 95. The collections storage room at the Southwest Museum is located in the Caracol Tower.

Structural Adequacy

The museum, which was constructed during the period 1912–1914, is a multilevel steel-and-concrete structure with a stucco exterior. The tile roof was replaced 10 years ago. The collections storage room has concrete floors, walls, and ceilings. Six aluminum-framed windows, measuring 3 x 12 feet (w x h), are along the three exterior walls of the collections room. A solid-core, wooden door leads to a spiral steel staircase that connects the tower to the exhibit area of the

museum. Overhead pipes, part of the air-conditioning system for the exhibit area, are located high on one wall above the mezzanine level of the collections storage room. No known structural failure of this system has been reported. The collections storage room is currently filled to approximately 95 percent capacity. The January 17, 1994, earthquake that hit the Los Angeles area caused visible cracks in the exterior walls; when the St. Louis District team visited the museum in July 1994 they were informed that none of the archeological collections was damaged.

Environmental Controls

No environmental controls are present in the collections storage room. It is not heated or air-conditioned. Due to the lack of heating and air-conditioning systems, temperatures range from approximately 55 to 95°F. Humidity levels are monitored with a hygrothermograph, but are not controlled. Collections are subject to the effects of ultraviolet radiation from sunlight entering through the large, unshaded, nonfiltered windows in the tower. Lighting is accomplished by 60-watt nonfiltered incandescent bulbs in fixtures that are original to the structure. The museum is regularly maintained by cleaning staff. Cleaning in the collections storage room is supervised by the archeological curator and takes place on an as-needed basis.

Pest Management

There is no integrated pest-management program in place at this facility. Signs of silverfish infestation were noted by the St. Louis District team during the site visit.

Security

The museum is protected by a coded pad intrusion alarm wired to Wells Fargo Security Company. A motion detector is located outside the only door to the collections storage room. This door is equipped with a dead-bolt lock. Access to the collections area is controlled by the assistant curator. There is no access to the windows in the tower due to their extreme height.

Fire Detection and Suppression

Fire-detection systems consist of smoke and fire alarms, located throughout the museum, which are wired to Wells Fargo Security Company. Fire-suppression systems present in the museum consist of fire extinguishers. A halon fire extinguisher is located in the collections storage room, which is serviced yearly; all staff are instructed in its use.

Artifact Storage

The archeological collections storage room is located in the Caracol Tower portion of the museum, designated as "C-3 Upper." The room has a mezzanine level built with metal shelving units (Figure 96) to provide additional storage space. Approximately 25 ft^3 of archeological material from OLF San Nicolas Island is stored on the mezzanine level, and 25 ft^3 of human skeletal remains from OLF San Nicolas and San Miguel Islands are kept in wooden drawers on the lower level of the tower. Some San Nicolas and San Miguel Islands materials may be on display in the exhibit hall.

Storage Units

Approximately 25 ft^3 of boxed archeological collections are stored on enameled, metal shelving units that are fitted with unsealed plywood shelves. These units measure 3 x 12 x 1 feet (w x h x d), and contain seven shelves per unit (see Figure 96). Boxes are stacked 2–3 high on the shelves. Lengths of basting tape have been stretched across the fronts of the shelves as a precaution against earthquake damage. Storage units have adhesive labels written in marker. Label information consists of rack (shelving unit) and expedition numbers and shelf letters (e.g., #56 San Nicolas Island 28F A–H). The number "56" denotes the rack number, "28F" the expedition number, and "A–H" the shelf letters.

Approximately 25 ft^3 of human skeletal remains, consisting of 22 individuals from OLF San Nicolas Island and one individual from San Miguel Island, are curated in a steel-framed storage unit with wooden drawers. Units are arranged in the center of the collections area,

Figure 96. Archeological collections at the Southwest Museum are stored on enamel metal shelving units.

on the lower level. These storage units measure 3 x 12 x 1.5 feet (w x h x d). Each storage unit contains 10–15 drawers. Steel bars run vertically through the handles of the drawers and attach to the steel frames of the units to prevent the drawers from opening during earthquakes. Storage units are labeled with a combination of adhesive labels and acidic-paper inserts in metal label holders. Information on both is entered in black marker. Label information consists of rack number and shelf letter.

Primary Containers

Primary containers for artifact collections are two sizes of reused, acidic boxes with volumes of 0.1 ft^3 and 0.3 ft^3. There is also one larger (0.5 ft^3) acid-free box containing an eel-grass skirt (Figure 97). Primary container labels are acidic-paper tags with information written in black marker that are attached to the fronts of the containers with cellophane tape. Information consists of provenience, expedition number, contents, and, occasionally, catalog numbers.

Primary containers for human skeletal remains are unsealed three-quarter-inch plywood drawers, assembled with glue and screws, inserted into the metal storage unit described above. Drawers are two sizes: 1.4 ft^3 and 3.2 ft^3. Drawers are labeled in black marker on adhesive

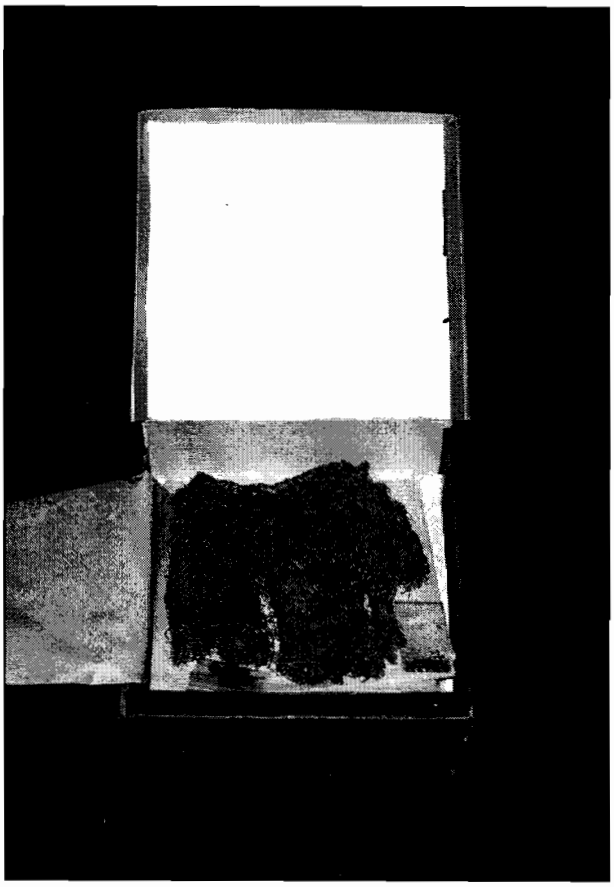

Figure 97. One acid-free primary container is used to hold an eel-grass skirt, which is wrapped in acid-free paper.

labels or on acidic-paper inserts in metal label holders. Label information consists of rack number, shelf number, and catalog number. One ground stone artifact and some textiles are also curated in the drawers containing human skeletal remains.

Secondary Containers

Secondary containers for the artifact collections include loose storage in primary containers (64%), nonarchival, 2-mil, plastic, zip-lock bags (18%); acidic-cardboard boxes (12%), and other (6%). Other includes acidic-paper bags, glass jars with steel lids, metal boxes, nonarchival plastic vials, and a Riker mount.

Secondary containers used for curating human skeletal remains in the drawer units consist of three different sizes of acidic-cardboard boxes. Two kinds of boxes are of glued construction, have telescoping lids, and measure 2.6 ft^3 or 0.4 ft^3. The third type of acidic-cardboard box used to curate human skeletal remains is of glued construction, has folded-flap lids, and measures 0.2 ft^3. Some boxes have additional containers consisting of paper and plastic bags, but percentages of these were not noted. Secondary containers are labeled directly with black marker. Label information consists of provenience, burial number, and catalog number.

Laboratory Processing and Labeling

All artifacts, except textiles, botanical samples, and ^{14}C samples, are cleaned and sorted by material class. Half of the artifacts are labeled in india ink directly on the artifact surface; the others are labeled with india ink on white paint that has been applied to the artifact surface. Textiles are labeled in india ink or pencil on acidic-paper tags attached to them with string.

Human Skeletal Remains

Twenty-five ft^3 of human skeletal remains are curated at this facility. Human skeletal remains from OLF San Nicolas Island consist of nine entire skeletons, four partial skeletons, seven crania, and two mandibles. There is also one cranium that was recovered from San Miguel Island. These remains represent a minimum number of approximately 23 individuals. All elements are in fair-to-good condition.

Records Storage

Approximately 1.6 linear feet (19.5 linear inches) of associated documentation is curated at the museum.

Paper Records

Paper records documenting research on OLF San Nicolas Island include one-quarter-inch of acidic 3-x-5-inch catalog cards. The information from these original cards has been recently entered into a computer database. Acidic-paper burial records (12 pages) are stored in a nonarchival three-ring binder. The St. Louis District team was told that the remainder of the primary documentation is curated at CSULA.

There is one acidic-cardboard box containing associated documentation concerning San Miguel Island. Paper records consist of less than 1 linear foot of administrative correspondence and a contract. According to the box label, which was written directly on the box in black marker, and conversations with Kritzman, the box belongs to NHMLAC.

Photographic Records

All of the artifacts have been photographed. Five linear inches of black-and-white photographs, negatives, slides, and contact sheets concerning historical-period San Miguel Island are stored loose in a box belonging to NHMLAC. These materials were returned to NHMLAC in 1996.

Maps and Oversized Documents

One oversized topographic map showing archeological sites on San Nicolas Island was removed from a standard, wooden map case for the St. Louis District inspection.

Reports

No reports were assessed by the team during the St. Louis District site visit.

Collections-Management Standards

Registration Standards

Accession Files

Accession files are created in the registrar's office.

Location Identification

The locations of artifacts within the museum have been entered into a computer database.

Cross-Indexed Files

Files are cross-indexed in the computer system by donor name, location in the museum, and artifact type.

Published Guide to Collections

No guide to the collections has been published.

Site-Record Administration

A trinomial site-numbering system is used. Southwest Museum catalog numbers document individual artifacts.

Computerized Database Management

A computerized database-management system, ARGUS, is used.

Written Policies and Procedures

Minimum Standards for Acceptance

The museum's collections committee makes decisions regarding the acceptance of collections. Only Native American material from North or South America is accepted.

Curation Policy

A written curation policy has not been established. Standards are at the discretion of the curators; however, a collections-management policy has been written since the time of the assessment.

Records-Management Policy

No written records management policy is in place; however, a collections-management policy has been written since the time of the assessment.

Field-Curation Procedures

The Southwest Museum does not have any written field curation guidelines. Only collections acquired through donation or purchase are accepted.

Loan Policy

The registrar has loan forms.

Deaccessioning Policy

A written deaccessioning policy is being created.

Inventory Policy

No written inventory policy has been established.

Latest Collection Inventory

In 1985–1986, the collections were inventoried and photographed and all data were entered into a computer database.

Curation Personnel

Kathleen Whitaker is the chief curator. Curation of archeological collections is the responsibility of Cheri Falkenstien-Doyle, curator of collections, and George Kritzman, an assistant curator.

Curation Financing

Curation activities are financed through private funds, endowments, and fund-raisers. Curation financing has been inadequate to store collections and documentation in archival products. Federal grants provide conservation documentation and archival materials for many parts of the collection.

Access to Collections

Archeological collections are accessible to interested parties engaged in scholarly research. Researchers must provide the museum with a written letter of intent and make an appointment. For access to the collections a form must be completed recording name, address, purpose of study, and when the information will be published. Researchers are supervised at all times by the assistant curator.

Future Plans

During the St. Louis District team's first visit, they were told that the museum board of trustees

planned to move the museum to a more modern facility; however, no definite plans are in place. The board of trustees considers moving the collections to a new facility to be more cost-effective than bringing the Caracol Tower up to current professional museum standards. During a second visit in July 1994, the St. Louis District team was told that the plan to relocate had been canceled. The museum is planning for the seismic retrofit and renovation of the tower.

Comments

1. Southwest Museum staff are dedicated to the safeguarding and care of the materials curated at their facility; however, funding is inadequate for proper curation.

2. An integrated pest-management program has not been put in place at this facility.

3. Adequate and appropriate fire-detection and -suppression systems are not in place.

4. Adequate environmental controls are not present in areas of this facility.

5. Light sources in the archeological collections storage areas do not have ultraviolet-protectant film or sleeves in place.

6. The collections storage room has reached 95 percent capacity.

7. Most of the collections are stored in nonarchival primary and secondary containers.

8. Human skeletal remains from OLF San Nicolas and San Miguel Islands are curated at this facility.

9. Storage of associated documentation from OLF San Nicolas and San Miguel Islands does not meet modern archival standards.

10. Written policies and procedures concerning curation, records management, and inventorying were not in place; however, since the time of the assessment a collections-management policy that addresses the storage and conservation of collections has been written.

11. Duplicates of all associated documentation has not been produced.

Recommendations

1. Ensure that collections are located in a structurally sound facility.

2. Provide more dedicated space for the storage of collections and associated records.

3. Implement a professional, integrated pest-management program for the facility.

4. Install an adequate and appropriate fire-detection and -suppression system.

5. Install an HVAC system to control temperature and humidity levels. Monitor the humidity and install a dust-filtration system in the collections facility.

6. Place ultraviolet filters on all light sources in the collections and records storage areas.

7. Replace inadequate primary containers with acid-free cardboard boxes. Apply adhesive, polyethylene label holders, with acid-free paper inserts, to the boxes. Labels should no longer be applied directly to the boxes. When label information or box contents change, inserts can be replaced, thus reducing the chance for conflicting and confusing information.

8. Replace secondary containers with 4-mil, ziplock, polyethylene bags and label with indelible ink. Labels for secondary containers should be made from spun-bonded, polyethylene paper (e.g., Nalgene polypaper), labeled in indelible ink, and inserted into the secondary containers.

9. Duplicate all paper records onto acid-free paper, and place in acid-free folders labeled in indelible ink. Place all folders in acid-free cardboard boxes, and apply adhesive, polyethylene label holders, with acid-free inserts, to the boxes.

10. Store duplicates of documentation in a separate, fire-proof, secure location.

11. Arrange associated documentation according to modern archival procedures and create a finding aid for the documentation collection.

12. Remove all contaminants (e.g., staples, paper clips, and rubber bands) from original documents.

13. Place all photographic materials in archival, polypropylene sleeves, and place sleeves in acid-free three-ring binders. Photograph logs should be on acid-free paper, in indelible ink.

14. Develop and implement comprehensive curation, a records-management, and inventory policies. (This has since been accomplished.)

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Phoebe Apperson Hearst Museum of Anthropology

University of California, Berkeley

Repository Summary

Volume of Artifact Collections: 29.5 ft^3

Collection Origin: OLF San Nicolas Island and San Miguel Island, NAS Fallon, NAS Moffett Field, NFD Point Molate, and NAVSTA Treasure Island

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

Linear Feet of Records: 2.5 linear feet

Compliance Status: Associated documentation will require partial rehabilitation to comply with current federal guidelines and modern archival-preservation standards.

Human Skeletal Remains: Forty-one catalog cards indicate that an undetermined number of individuals recovered from the EFA West facilities of NAWS Point Mugu (OLF San Nicolas Island and San Miguel Island), NFD Point Molate, and NAVSTA Treasure Island (Yerba Buena) are being curated at the Phoebe Hearst Museum at UCB. Human skeletal remains are located in the basement of the Hearst Gymnasium for Women.

Status of Curation Funding: Curation activities are financed through the general museum budget from the university, which is supported by state funds and endowments.

Collection Update (October 1997): After completion of the assessment in 1994, EFA West determined that human remains from CA-SFR-04 were taken from Navy property on Yerba Buena Island in 1933. A NAGPRA inventory has been completed. Furthermore, Recommendations 6, 7, and 8 have been completed.

Date of Visit: September 23, 1993, and July 19 and 20, 1994

Point of Contact: Edward Luby, archeologist

The Phoebe Hearst Museum (Figure 98) houses major anthropological and archeological collections from around the world. Particular importance is attached to archeological and ethnographic collections from California. Collections from five EFA West naval shore facilities are located in the collections storage rooms of the Phoebe Hearst Museum. Refer to Table 17, which illustrates the volume of artifact collections that are housed at the museum from naval shore facilities. The St. Louis District team did not evaluate the human skeletal remains in the collections storage area of the museum; therefore, Table 17 does not include the volume of human skeletal remains being curated.

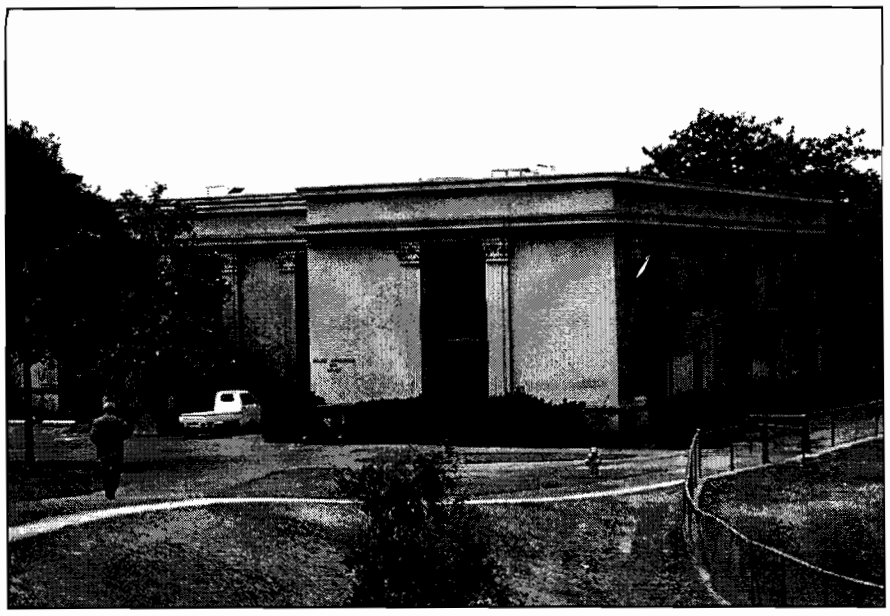

Figure 98. Archeological and osteological collections are stored in the Hearst Gymnasium for Women.

The Phoebe Hearst Museum currently occupies space in four large multipurpose structures. Two buildings, Kroeber Hall (Repository 1) and the Hearst Gymnasium for Women (Repository 2), are located on the main campus of UCB. The third building is the Marchant Building (Repository 3; Figure 99). It is a large industrial structure where the university leases space to several companies, as well as provides off-campus storage to various university departments. A fourth building on the Clark-Kerr campus also houses museum collections.

Table 17. Approximate Size of Naval Shore Facilities Artifact Collections from the Hearst Gymnasium for Women at UCB

Facility	Collection Size (ft^3)
NAS Moffett Field	3.0
NAWS Point Mugu	
OLF San Nicolas Island	19.4
San Miguel Island	1.6
NFD Point Molate	2.9
NAS Fallon	1.6
NAVSTA Treasure Island	1.0
Total	29.5

Assessment of Repository 1

Structural Adequacy

Kroeber Hall was built in 1959 to house the Lowie Museum of Anthropology, the Anthropology Department, and the Art Department. The museum's name was recently changed to the Phoebe Apperson Hearst Museum of Anthropology. The 113,000 ft^2 structure has a concrete foundation and reinforced-concrete walls. The flat roof is original to the structure and is made of composition asphalt, tar paper, and gravel. The roof and foundation are structurally solid. Cracks and leaks in the foundation and walls have been located and repaired. Repository 1 has been seismically tested for earthquake resistance, and received a good rating.

Repository 1 is a four-story structure. Half of the basement, where the collections storage room is located, is belowground; the east side of the basement is belowground, and the west side is at ground level. There have not been any external renovations; however, there has been significant internal remodeling. The interior walls of the collections storage room consist of concrete

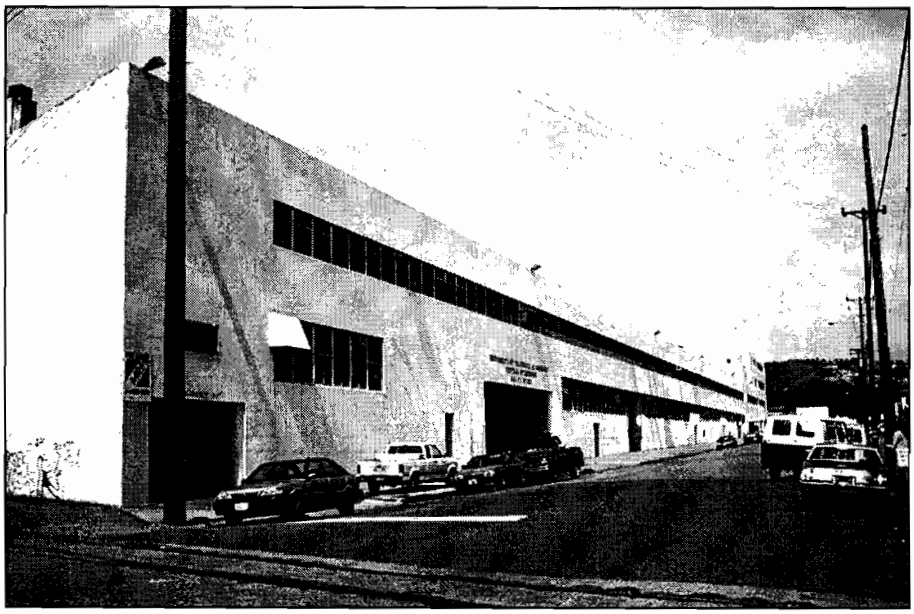

Figure 99. Exterior view of the Marchant Building, the off-site storage facility for the Phoebe Hearst Museum.

walls, plasterboard-and-plaster walls, and portable dividers. A steel mezzanine level was built within the collections storage room to create more storage space. There are numerous windows in the building. The windows associated with the museum offices and work areas total eight on the west side and four on the east side. They are 6 x 8 feet (w x h), steel framed, and equipped with blinds. No windows are present on the east side of the basement level, where the collections are housed. There are several sets of locked doors and gates that separate the collections storage rooms and offices from the rest of the building.

Types of activity areas and rooms present at Repository 1 include artifact holding, washing, processing, conservation, study, and storage areas; records study and storage areas; a hazardous-materials storage area; a materials and supplies storage area; exhibit rooms; offices; a security-monitoring area; several mechanical and utility rooms; and a receiving and loading dock.

Environmental Controls

Repository 1 has temperature controls for heating only. The targeted temperature is 70°F. A steam-heated, forced-air heating unit, which is monitored by a computer, is present. Other utilities present in the structure include running water for processing artifacts, rest rooms, electricity, and telephone and computer lines. The plumbing, heating, and electrical systems are all original to the structure, with various necessary repairs and additions. There have been minor leaks from the plumbing; evidence of water damage to the building was observed during the site visit. All cracks in the foundation and basement walls have been repaired. Dust filters are located on the air-intake ducts. The ductwork is periodically cleaned and the filters are replaced by university maintenance staff.

Humidity levels are monitored by six hygrothermographs located throughout the collections storage area, which read and record data for the Energy Conservation Department on campus. The conservator has been using silica gel in the exhibit cases and the metals cabinet to reduce excessive humidity levels. Lighting is accomplished by nonfiltered fluorescent tubes. Light bulbs are checked for ultraviolet content with a Crawford Ultraviolet monitor, and bulbs are replaced when emitting ultraviolet levels that are too high. Maintenance is regularly performed by university custodial and museum staff. The exposed pipes may have asbestos wraps as insulation. Hazardous-materials are stored in cabinets in

the conservation laboratory. All chemicals are reported directly to the Environmental Health and Safety Office on campus, which reports to the City of Berkeley. The types and quantities of hazardous materials present are unknown; the St. Louis District team was not given access to the area.

Pest Management

Precautions are taken against insect and rodent infestation. The museum conservator, Madeleine Fang, is currently monitoring the situation and putting a consistent program in place. Monitoring includes mouse traps at all points of entry, sticky traps, and "dry die" under the collections storage containers for crawling bugs. When infestations are noted, sticky traps for rodents and insects are used, as are nitrogen treatments, freezing contaminated objects, and fumigation if necessary. New acquisitions are isolated in a separate, secure room in the basement and inspected for pest infestation.

Security

Security measures for Repository 1 include barriers and alarms. There is a guard at the security desk in the entrance to the collections storage areas. The St. Louis District team was required to sign in and wear badges bearing their pictures to allow them access to nonpublic areas. Campus police patrol the structure during off hours. Special artifacts and type collections are secured in one of two combination-lock safes. There was no evidence of unauthorized access into the building, but past attempts have been reported. Various interior doors lead to office areas and lab areas. These doors are locked at all times. Other departments in the building do not have access to these areas unless they check in at the security desk.

Fire Detection and Suppression

Repository 1 has a halon sprinkler system (Figure 100), smoke detectors, fire walls and doors, heat sensors, portable fire extinguishers, and a fire alarm that is wired directly to the fire department. The fire extinguishers are inspected twice yearly. At the time of the assessment, the extinguishers in the collections storage room had been recently inspected (June 1994).

Artifact Storage

The collections storage room is approximately 33,945 ft^2. The types of collections held in this

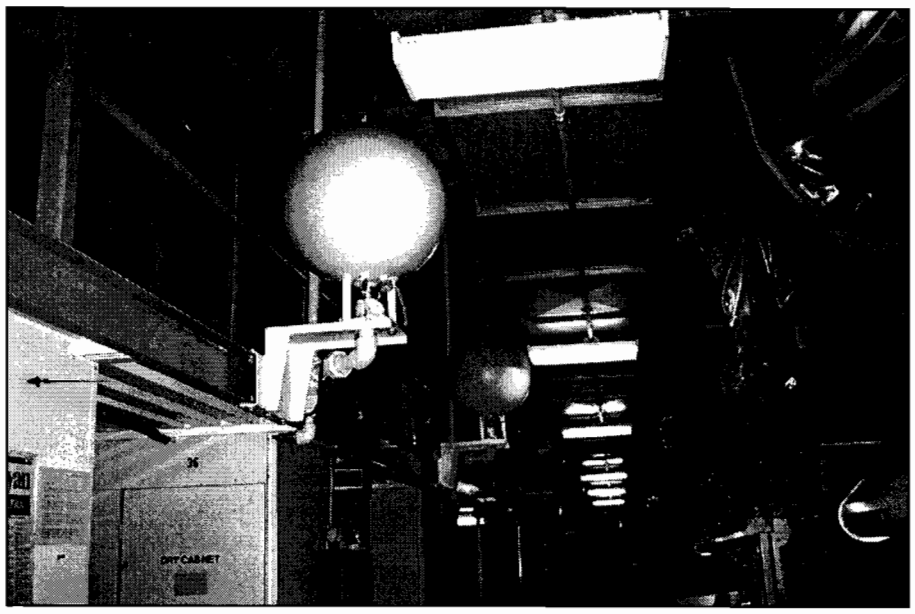

Figure 100. A halon system is employed in Kroeber Hall for fire suppression.

Figure 101. U.S. Navy collections at the Phoebe Hearst Museum Kroeber Hall location are stored in padlocked metal cabinets with Medex and wooden drawers.

building are 70 percent ethnographic and 30 percent archeological. The storage room is at full capacity. Clutter in the area is a result of the quantity of collections stored and the lack of available space.

Storage Units

Storage units present in Repository 1 consist of lockable metal cabinets with Medex and wooden drawers that are painted with gray, fireproof paint (Figure 101); large safes with combination locks; and open steel shelving units on the mezzanine level for oversized objects. The open shelving units have polyethylene curtains draped over them to protect them from both dust and water. Some of the units are directly under pipes that have leaked in the past. Extremely large basketry is suspended from the ceiling in nets. The conservator has them stored in this manner to prevent them from collapsing under their own weight. The St. Louis District team noticed that some large nonfederal objects have been placed directly onto the ductwork for storage. The storage unit that houses approximately 1.6 ft^3 of artifacts recovered from NAS Fallon is a painted metal cabinet bolted to the floor, which is equipped with locked doors.

Primary Containers

The collection from NAS Fallon, CH-63-83, is stored in a painted wooden tray painted with fire-repellent paint. The dimensions of the open tray are approximately 20.5 x 4.5 x 28 inches, or 1.6 ft^3. There is no damage to the drawer. The label on the drawer is an acidic-paper card attached with staples. The label is typed, with additional information written in pencil.

Secondary Containers

Secondary containers vary between plastic bags and acidic-cardboard, matchbook-style, boxes. Many artifacts are stored loose in primary containers. Refer to Table 18 for a summary of secondary containers used.

Laboratory Processing and Labeling

The artifact collection from NAS Fallon is 100 percent lithics. All lithics have been cleaned, and labeled directly with ink. The artifact labels are consistent and legible. The records indicated that one shell artifact is included in this collection, but it could not be located.

Table 18. Summary of Secondary Container Types Used to House Naval Shore Facility Collections at the Phoebe Hearst Museum, by Percentage

Secondary Containers	Repository 1 (%)	Repository 2 (%)	Repository 3 (%)	Total (%)
Plastic bags	50	15	56	41
Loose	40	25	17	27
Acidic-cardboard boxes	—	25	2	9
Acidic-cardboard trays	—	25	—	8
Matchbox-style boxes	—	—	22	7
Paper bags	10	10	5	8
Total	100	100	100	100

Note: Percentages based on total ft^3 of materials in the collection.

Human Skeletal Remains

No human skeletal remains recovered from EFA West installations are stored in Repository 1. Refer to the assessment of Repository 2, below.

Assessment of Repository 2

Structural Adequacy

The Hearst Gymnasium for Women (see Figure 98) was built in 1927. Some sections are still used as a gymnasium, but several other departments, including the Phoebe Hearst Museum, occupy space in the building. The collections storage area is located in the basement. A functional swimming pool is located on the first floor of the gymnasium. The building is approximately 142,000 ft^2 and has a concrete foundation with concrete-block walls. The concrete roof, last replaced in 1990, is covered with tar and tile. The structure appears solid; however, the inspection team noted many cracks in the foundation and exterior walls that have been sealed and repaired. Water stains on the floor are the result of a leakage problem from water seeping through the foundation and belowground exterior walls. There has been water damage to the structure and to the collections that were stored on the floor of the basement. There are two floors above ground and one floor below ground (where the collections storage room, archeological and osteological labs, and museum offices are located). The only external renovation has been replacement of the roof. There have been extensive internal renovations to accommodate the museum's need for collections storage space.

Activity areas in the structure include artifact-holding, -washing, -processing, and -conservation areas; storage areas; study areas; records-storage and -study areas; offices, rest rooms; showers, swimming pool; mechanical and utility rooms; labs; and classrooms. The athletic division offices are also located in this building. The plumbing was replaced in 1985, and the electrical system has been upgraded as necessary. Other utilities present include a steam-forced heating system, running water, rest rooms, and telephone and computer lines. There is also an outside elevator shaft that travels between the ground floor and the basement for transporting oversized and heavy materials. There are many windows on all sides of the building, but none in the basement, where the collections are stored.

Environmental Controls

The Hearst Gymnasium for Women has localized environmental controls that are adjusted by the departments located in the building. Repository 2 has a blower for air circulation in the basement and is heated by a forced-air, steam heater. There are filters on the air vents. The targeted temperature in the basement is approximately 70°F. Humidity cannot be controlled, but it is monitored by a hygrothermograph. The average

range for humidity has been 50–55 percent; there is seasonal fluctuation. Fluorescent-tube light sources in the basement do not have ultraviolet filters. Bulbs are monitored for ultraviolet content and are replaced if levels are unacceptable. Maintenance is performed by custodial and museum staff on an as-needed basis. The archeological lab uses what they consider to be a minimal amount of hazardous chemicals.

Pest Management

Fang is employing the same techniques at Repositories 2 and 3 that she is currently implementing in Repository 1. There has been a problem in the past with roaches in the collections storage room. Fang has not found any in the collections. The university's pest-control department provides baited cockroach traps that are routinely monitored.

Security

Security measures for Repository 2 include barriers, alarms, and controlled access to collections storage areas. Campus security patrols the area. All doors are equipped with key locks, dead bolts, or padlocks. Windows are present only in the office areas. These are sealed and covered with a metal grate. It is necessary to go through a hallway with several locked doors and gates in order to secure the other departments within the structure.

Exterior doors are metal, and lead to locked metal security gates. All of the interior doors in the collections storage area that lead to mechanical and utility rooms are locked. The small office area within the collections storage room is surrounded by a locked gate. In addition, each aisle between the storage units has a hinged plywood door that is padlocked, blocking access to the drawers of artifacts. Access to the artifact and associated documentation collections is tightly controlled by security and museum staff.

Fire Detection and Suppression

Fire-safety equipment present in Repository 2 includes manual fire alarms wired directly to the fire department, a functional sprinkler system, and fire extinguishers that are checked twice yearly by university staff.

Artifact Storage

The collections storage room is approximately 9,426 ft^2. This area is used exclusively for the storage of archeological collections, with the exceptions of small areas set up for processing artifacts and research. The collections storage room is at 90 percent capacity. The museum accepts collections on a case-by-case basis.

Storage Units

The St. Louis District team evaluated 28.5 ft^3 of archeological collections from five EFA West installations. (The 1 ft^3 of material from NAVSTA Treasure Island was not evaluated at this time.) Storage units in the collections storage room are metal cabinets with wooden drawers. Some of the metal cabinets have doors, but approximately half are open. The aisles between the storage units are secured by padlocked plywood doors. Table 17 illustrates the volume of artifact collections from each naval shore installation.

Primary Containers

The collections housed in Repository 2 are in drawers (Figure 102). Each drawer is approximately 1.6 ft^3. Some of the drawers are unfinished pine or plywood; others are composed of unfinished, formaldehyde-free Medex board. Some drawers have been painted with fireproof, gray paint. The museum is in the process of replacing wooden drawers with Medex drawers. As the collections are being rehoused, all trays are being lined with ethafoam. The labels on each drawer are acidic-paper cards that bear typed site-number information. Additional information has been written in pencil. Most of the drawers are overpacked, which is damaging to the secondary containers within them. The museum is actively working to rehouse the collections, relabeling drawers and updating tray lists.

Secondary Containers

Secondary containers present include plastic bags, acidic-cardboard boxes and trays, and

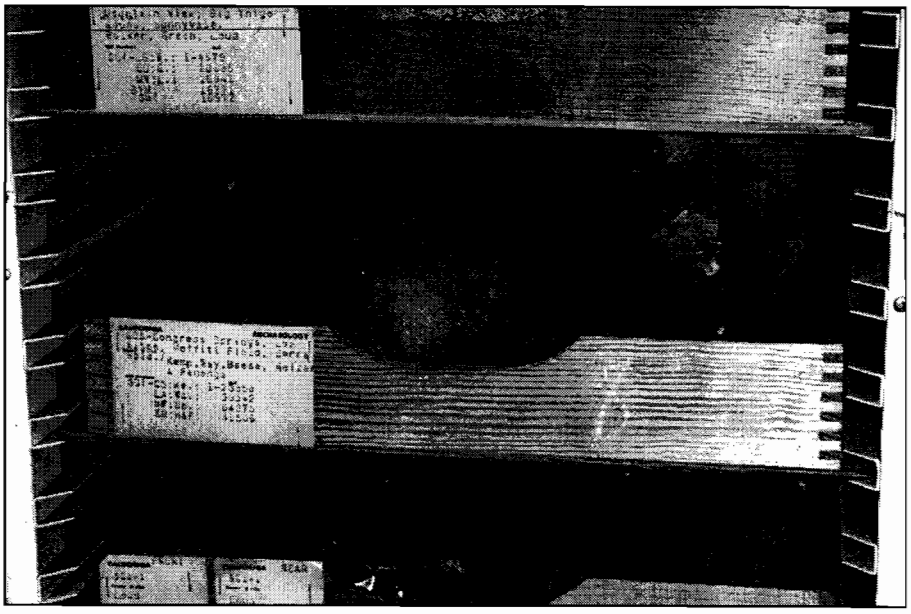

Figure 102. Storage units at the Hearst Gymnasium for Women consist of Medex and/or wooden drawers in a metal frame.

matchbox-style boxes. The rest of the artifacts are loose inside drawers. Refer to Table 18 for a summary of secondary containers used.

Laboratory Processing and Labeling

Eighty-five percent of the archeological collections associated with EFA West facilities that are stored in Repository 2 have been cleaned and labeled. Ninety-five percent of the labeled artifacts bear labels that consist of black, yellow, or white ink applied directly to the artifact. The remaining 5 percent of the labeled artifacts, shell beads, have acidic-paper tags on strings, which have been labeled in ink. Refer to Table 19 for a summary of material classes represented in the collections stored in Repository 2.

Human Skeletal Remains

Human skeletal remains are curated in the osteology storage area within the main collections area of the Hearst Gymnasium basement. Temporal constraints precluded St. Louis District assessment of the human skeletal remains or the storage containers. The assessment team attempted to gather detailed information as to the minimum number of individuals recovered from each installation by inspecting catalog cards. However, museum personnel indicate that they believe it is not possible to determine the minimum number of individuals from the

Table 19. Summary of Material Classes Present in Naval Shore Facility Collections at the Hearst Gymnasium for Women at UCB, by Percentage

Material Class	%
Ceramics	5
Lithics	51
Unworked faunal remains	1
Worked faunal remains	19
Unworked shell	16
Worked shell	6
Other[a]	2
Total	100

Note: Percentages based on total ft^3 of materials in the collections.
[a] "Other" includes botanical remains, asphaltum, red ochre, charcoal, and basketry impressions.

catalog cards, so this should be considered as an estimate only.

Assessment of Repository 3

Structural Adequacy

The Marchant Building (see Figure 99) was originally constructed in 1956 as an industrial factory. The space has since been leased to several different companies and university departments and have been converted to suit their needs. Of the 410,000 ft^2, the Phoebe Hearst Museum leases approximately 37,000 ft^2 of the basement, first, and second floors. The east end of the building has three floors above ground and a basement. Most of the building has two floors above ground with a basement. The west end of the building has three floors above ground. The roof is tar and gravel and has been repaired as needed. Re-roofing was scheduled for 1995– 1996, and funds had been allocated for seismic upgrading of the building in 1997. The building appears to be solid. The St. Louis District team noted many repaired cracks in the foundation and exterior walls.

There have been extensive internal renovations to accommodate various businesses occupying space in the Marchant Building. Bands of windows are present on the north, south, and east sides of the building. There are no windows on the west end of the building. The building has loading docks on both the north and south ends and is equipped with two freight elevators.

Environmental Controls

Repository 3 has computerized temperature controls for the forced-air, hot water heating system. Two large blowers circulate air. The targeted temperature is 70°F. There are dust filters in the heating vents and on the air blowers; all filters are changed yearly. Humidity in the collections storage area is monitored by a hygrothermograph, but is not controlled.

Natural light, from the windows on the south exterior wall, and nonfiltered fluorescent tubes light the facility. Windows have been painted over in white paint. The university has a facilities-maintenance program that is used on an as-needed basis. Utilities have been repaired and upgraded on an as-needed basis. Utilities present in the collections storage area include heating and electrical systems and telephone and computer lines. There are functional overhead pipes in the collections storage area. Collections are stored under these pipes, but are protected from water and dust with polyethylene sheeting. Pipes have leaked onto the collections in the past; staff have mapped and continue to monitor leaks.

Pest Management

The pest-management program for Repository 3 includes sticky traps placed on columns in the structure and mouse traps to monitor and control rodent infestations. The conservator is implementing a rotating, three-week program to control pest-infestation problems. When necessary, nitrogen treatments, freezing, and fumigation are used. The St. Louis District team noted moth and beetle infestations of the collections storage area. The conservator states that pest infestation problems were minimal due to the location of an herbarium next door with careful, full-time, monitoring. Staff and students clean the collections storage area.

Security

Security measures for the building include barriers, alarms, and controlled access. All guests must sign in and out at the security desk, located in the lobby at the east end of the building. No evidence of unauthorized entry was observed during the site visit, and there have been no reports of unauthorized entries in the past.

Security measures in place specifically for the collections storage area consist of controlled access by selected museum staff, locked gates, and window locks for windows along the south wall. Lockable cabinets are used to store some artifact and associated documentation collections. The collections from naval shore installations are not stored in these cabinets. The area that is designated the collections storage area is surrounded by a chain-link fence. There are two

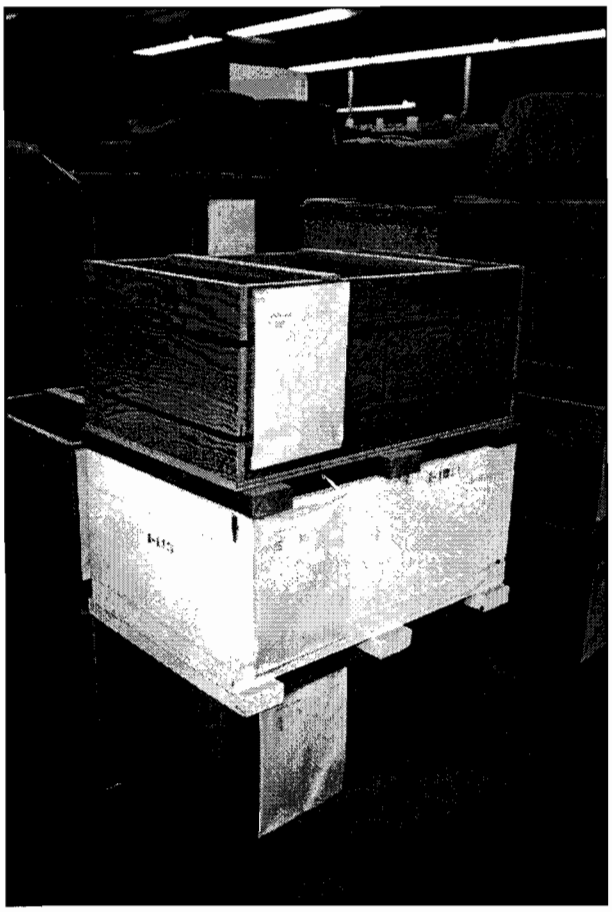

Figure 103. Storage units at the Marchant Building include wooden and metal crates, which can be mechanically lifted.

entryways where the fence rolls back, but only one is accessible; collections and equipment are stacked in front of the other entrance.

Fire Detection and Suppression

Fire detection is provided by alarms located throughout the area that are wired directly to the local fire department. Fire-suppression equipment includes a wet-pipe sprinkler system and three fire extinguishers that are mounted on columns in the collections storage area. The columns are painted with red stripes, and the extinguishers are inspected twice yearly. Two manual fire hoses are located in the collections storage area.

Artifact Storage

The collections storage area in Repository 3 is approximately 37,000 ft^2. Approximately 90 percent of this area is being used for storage. Oversized material from archeological, historical-period textile, ethnographic, faunal collections, furniture and statue reproductions, and old exhibit props are kept in the second-floor space. More than 30 percent of the area is used for the storage of archeological collections.

Storage Units

The storage area is at approximately 90 percent capacity. The storage units for collections recovered from EFA West installations are wooden pallet crates (Figure 103) and shelving units that are both wood and metal. The shelving units are open and are utilized much like closets, with boxes stacked inside. The storage boxes were tightly packed and overstacked, causing compression damage to the primary containers. The storage area was cluttered with unorganized collections and equipment.

Primary Containers

The inspection team was only allowed access to a portion of the archeological collections stored in this building. A forklift was needed to move pallet crates that were blocking the containers thought to contain collections from OLF San Nicolas Island, site CA-SNI-128, and Naval Fuel Depot, Point Molate. The forklift was inoperable (discharged battery); therefore, the materials from OLF San Nicolas Island and NFD Point Molate were not inspected.

However, the inspection team did evaluate 7.6 ft^3 of archeological materials stored in Repository 3, including 6.6 ft^3 of archeological collections from OLF San Nicolas Island, site CA-SNI-112, and 1 ft^3 of archeological material from Naval Fuel Depot, Point Molate, site CA-CCO-283.

Primary containers for most of the collections were 1-ft^3 acidic-cardboard boxes (Figure 104) that were glued and folded. Three of the boxes were damaged due to compression, tearing, and age. All containers were covered with dust. The labels on the boxes are written in

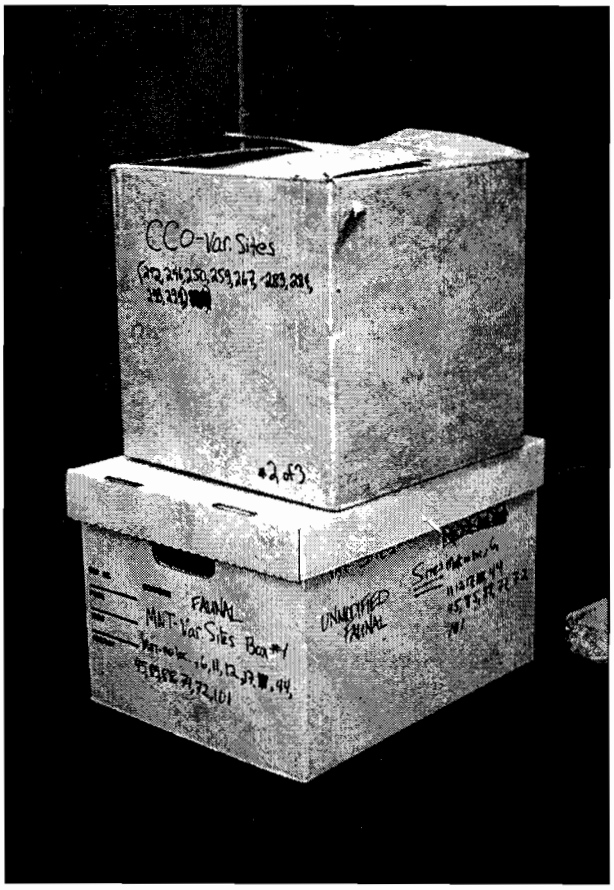

Figure 104. Most of the primary containers housing Naval shore facility collections are acidic-cardboard boxes.

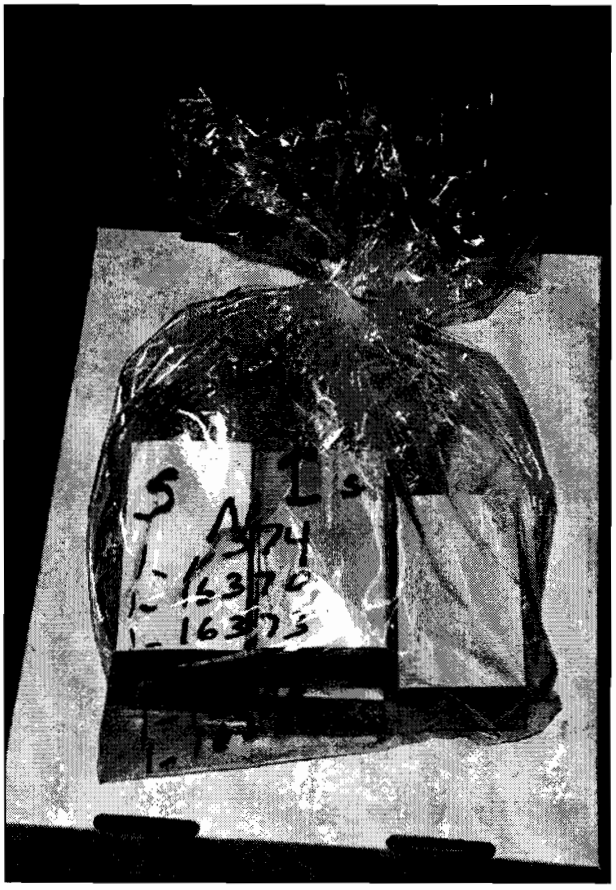

Figure 105. Plastic bags are used as secondary containers for artifacts in the Marchant Building.

marker, and include site number, general contents, and arbitrary box number. Closures on most of the boxes are folded-flap lids, but one box has a telescoping lid. Archeological materials from OLF San Nicolas Island are stored in a pallet crate, which is glued and nailed together. The crate has a label spray painted on the wood and a photocopied piece of paper in a plastic sheet that is stapled to the crate. There is no damage to the crate. Three 2-x-4-inch wooden boards nailed to the open end of the crate support a piece of plywood that serves as the crate's lid.

Secondary Containers

Secondary containers used for archeological materials stored in Repository 3 include plastic bags (Figure 105), paper bags, acidic-cardboard, matchbox-style boxes, and an acidic-cardboard cigar box. Many artifacts are loose inside the primary container. Refer to Table 18 for a summary of secondary containers used.

Laboratory Processing and Labeling

The artifacts in EFA West collections housed in Repository 3 are 83 percent faunal remains and 17 percent lithics. Seventy-eight percent of the faunal remains have been cleaned, and 80 percent of them are labeled directly with black ink. All of the lithics have been cleaned and labeled, either directly with black ink or with typed pieces of paper glued to them.

Human Skeletal Remains

Human skeletal remains are not stored in Repository 3. Refer to the assessment of Repository 2, above.

Figure 106. Catalog-card file cabinets in Kroeber Hall at the Phoebe Hearst Museum.

Assessment of Repositories 1–3

Records Storage

Approximately 1 linear foot of associated documentation was assessed. These records include three copies of the accession records and manuscripts in the Hearst Archaeological Research Facility (ARF) system.

Paper Records

Paper records housed at the Hearst include three copies of accession records. The original accession records are stored on the mezzanine level in Repository 1—Kroeber Hall—in catalog-card file cabinets (Figure 106). A duplicate copy on acid-free paper is stored in the registrar's office in Kroeber Hall. The third (research) copy of the accession records is stored in Room 51, also in Repository 1. All three copies of the accession records are filed sequentially by accession number. A request form must be filled out to gain access to these records. Registrars supervise all work with the documentation.

The archeological archives are filed and stored by manuscript number under the ARF system used at the museum. All contaminants (e.g., paper clips, staples, and rubberbands) have been removed from the original documentation. ARF records are stored in a room off of the main collections storage area in Repository 2. Documents are stored in acidic file folders with acidic, adhesive labels. Research copies are produced upon request. Documentation and most containers are in generally poor condition.

Photographic Records

No photographic records associated with the federal collections are present.

Maps and Oversized Documents

The only assessed map was in an original brochure in the ARF collection. This was stored folded in an acidic folder within an acidic envelope with other documents. The map is deteriorating.

Reports

No reports associated with federal collections were present.

Collections-Management Standards

Registration Procedures

Accession Files

All artifacts and documentation are accessioned upon receipt. Accession files are maintained and include all related property receipts, initial inventories, and documentation that accompanies the collection.

Location Identification

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

Cross-Indexed Files

The registrar's files are cross-indexed by accession number, collector name, donor name, catalog number, and site number.

Published Guide to Collections

No guide to the collections has been published. However, there are exhibit catalogs for those artifacts that have been on display. Literature on portions of collections that have been researched has been published.

Site-Record Administration

The California trinomial site-numbering system is used.

Computerized Database Management

A computerized database is currently being developed.

Written Policies and Procedures

Minimum Standards for Acceptance

Archeological collections are accepted on a case-by-case basis.

Curation Policy

There currently is not a written curation policy. The collections-management group is in the process of developing such policies.

Records-Management Policy

There is no written records-management policy.

Field-Curation Procedures

The Phoebe Hearst Museum does not have written field-curation guidelines.

Loan Policy

The museum has an extensive loan form that covers many concerns about the care and protection of the materials. The written policies mandate necessary security measures, environmental conditions, exhibition, insurance requirements, costs of facilities inspection, shipping materials, time limits, permission for photography, publication, and reproduction.

Deaccessioning Policy

There is no written deaccessioning policy.

Inventory Policy

There is no written inventory policy.

Latest Collection Inventory

The last complete collections inventory was done in the 1960s. The museum is in the process of systematically inventorying the collections and entering those data into a computerized system.

Curation Personnel

The museum has an extensive staff that is responsible for the various tasks associated with the artifact and associated documentation collections. The staff is divided into career staff, casual staff, and work-study students. There are two positions for curatorial anthropologists; Dr. M. Steven Shackley, associate research archaeologist, is responsible for the archeological collections, and Dr. Edward M. Luby is responsible for NAGPRA issues. Other curation personnel include Leslie Freund, collections manager; Madeleine Fang, conservator; Joan Knudson, registrar; and Dr. Ira Jacknis, associate research anthropologist.

Curation Financing

Curation activities are funded through the general budget of the museum. The museum budget is funded by the state of California, the Hearst endowment, and other small endowments. In addition, the museum is working with various federal agencies to fund curation activities.

Access to Collections

The collections stored in Repositories 1–3 are accessible with the consent and supervision of museum staff. The collections housed in Repository 3 are relatively inaccessible. The collections are stored in pallet crates that can only be moved using a forklift.

Future Plans

The museum is planning on rehabilitating the San Nicolas and San Miguel Islands collections in the near future and has a written policy for their long-range plans (1992–1997). Their goals are to strengthen academic and research programs, enhance the care and use of the collections (including computerization, compliance with NAGPRA, conservation, security and disaster planning), strengthen and focus exhibition, public education, and outreach programs, enhance the ability to achieve financial stability and growth, and enhance the efficiency and productivity of the museum as a whole. The museum will have a new director and a new collections manager as of August 1994. Policy changes are expected.

Comments

1. Total temperature controls are not present in all repositories and collections storage areas.

2. There is evidence of water damage to Repositories 1 and 2.

3. Humidity levels are monitored, but not controlled, in the majority of the collections storage areas. Relative humidity levels generally average 50–55 percent.

4. An integrated pest-management program had not been implemented at the time of the site visit.

5. Security and fire-safety measures are adequate at all three repositories.

6. Collections storage areas are at full capacity.

7. Most of the artifact and records collections are not stored in archival containers.

8. A portion of the collections stored in Repositories 2 and 3 have not been cleaned or labeled.

9. The condition of human skeletal remains recovered from U.S. Navy installations was not evaluated by the St. Louis District team.

10. The Phoebe Hearst Museum does not have many of the written policies and procedures recommended for curation facilities.

11. A few of the collections' catalog cards were filed by county rather than by site number.

12. The museum does not have a finding aid for their records collections, making it very difficult to access the necessary information regarding EFA West collections.

13. The museum does not consider the collections recovered from naval facilities to be the property of the Navy.

Recommendations

1. Install an HVAC system in all repositories and collections storage areas to monitor and control temperature and humidity levels. Install dust-filtration systems in collections storage areas, and change the filters regularly.

2. Ensure that repositories are stable, and sprinkler systems function properly, to avoid water damage to the collections.

3. Determine ultraviolet content for all light sources.

4. Implement a professional pest-management program that monitors and controls pest infestations in all facilities.

5. Install space-saving equipment to better utilize storage space.

6. Label all artifacts on the surface over a barrier of clear acrylic with india ink and seal with clear, acrylic coating.

7. Replace all primary containers with archival containers and label containers consistently.

8. Replace all secondary containers with 4-mil, zip-lock, polyethylene bags and label with indelible ink. Labels for secondary containers should be made from spun-bonded, polyethylene paper (e.g., Nalgene polypaper), labeled in indelible ink, and inserted into the secondary containers.

9. Duplicate all paper records onto acid-free paper and place in acid-free folders labeled in indelible ink. Place all folders in acid-free cardboard boxes, and apply adhesive, polyethylene label holders with acid-free inserts to the boxes.

10. Store duplicates of documentation in a separate, fireproof, secure location.

11. Arrange associated documentation according to modern archival procedures and create a finding aid for the documentation.

12. Flatten oversized documents and place in a flat map-storage case for long-term curation.

13. Document and implement artifact and records curation, records-management, deaccessioning, and inventory policies.

14. Provide EFA West information on or access to the human skeletal remains, for compliance with NAGPRA.

15. Determine the ownership of all materials recovered from federal lands (e.g., all naval shore facilities under the footprint of EFA West).

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University of California, Los Angeles

Repository Summary

Volume of Artifact Collections: 16.1 ft^3

Collection Origin: OLF San Nicolas Island and San Miguel Island

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

Linear Feet of Records: < 1 linear foot

Compliance Status: The majority of associated records will require complete rehabilitation to comply with current federal guidelines and modern archival-preservation standards.

Human Skeletal Remains: 100 ft^3

The human skeletal remains of approximately 50 individuals from NAWS Point Mugu (OLF San Nicolas Island) are stored in the Physical Anthropology Laboratory, Haines Hall, UCLA.

Status of Curation Funding: Curation of archeological collections is financed by the university.

Date of Visit: October 28, 1993

Point of Contact: Roger Colten, curator of archeology

Approximately 116.1 ft^3 of prehistoric artifacts and human skeletal remains, and less than 1 linear foot of associated documentation from San Miguel and OLF San Nicolas Islands are curated in two separate rooms within Haines Hall on the UCLA campus. A total of 16.1 ft^3 of archeological materials and all associated documentation are curated in a large divided room (Collections Storage Area 1) where Dr. Colten has his office, records storage room, and artifact storage room. Refer to Table 20 for a summary of these collections. Approximately 100 ft^3 of human skeletal remains are stored in the Physical Anthropology Laboratory (Collections Storage Area 2).

Assessment

Haines Hall, centrally located on the UCLA campus, is used as a classroom building for the Anthropology Department and as a curation area for the UCLA archeological and human skeletal remains collections. There are offices, classrooms, rest rooms, and laboratories in the building. The collections area laboratories are located in the third sub-basement of the building.

Structural Adequacy

Haines Hall is a brick building with a poured-concrete foundation. There are two floors above ground and three floors below. The roof is constructed of ceramic tiles over an asphalt-paper

Table 20. Summary of Artifact Material Classes Present in San Nicolas and San Miguel Islands Collections at UCLA, by Percentage

Material Class	San Nicolas Island (%)	San Miguel Island (%)	Total (%)
Lithics	42	100	45
Faunal remains	12	—	12
Shell	30	—	29
Basketry	8	—	7
Other[a]	8	—	7
Total	100	100	100

Note: Percentages based on total ft^3 of materials in the collection.
[a] "Other" includes soil samples, asphaltum residue, and wood.

base. The building has many windows on the aboveground floors; there are no windows in the basement levels where the collections storage rooms are located. Exterior doors are either solid-core wood or steel. Interior doors are solid-core wood. The building foundation has cracks that allow water to leak into the sub-basement collections storage rooms, causing damage to primary containers.

Collections Storage Area 1

Collections Storage Area 1 is composed of three adjoining rooms located in the third, lowest sub-basement of Haines Hall. Access to Dr. Colten's office is from a central hallway. The artifact and records collections storage rooms branch off the office through single-panel, wooden doors. Collections Storage Area 1 has a poured-concrete floor and ceiling, with painted concrete-block walls. The building is not structurally sound, as evidenced by water seeping into collections storage areas from overhead. Although there are overhead water pipes, the leaking water is a result of heavy rains; water seeped in from the floor above. The collections have been draped with sheets of plastic in an attempt to protect them from further water damage. Efforts have been made to control water seepage by drilling an additional street drain at ground level to accommodate excess water. Overhead vents have been cemented shut in another attempt to stem water leakage. Although these measures have lessened some of the problems, they are inadequate. A more permanent solution should be sought before the artifact and records collections are irreversibly damaged.

Collections Storage Area 2

A single-panel, solid-core, wooden door is the only entrance from the hallway in the third sub-basement to Collections Storage Area 2. This area has a poured-concrete foundation and ceiling, with painted, concrete-block walls. Overhead pipes are present, but there has been no structural failure of this system. The human skeletal remains collections have been draped with sheets of plastic to protect them from water seepage from the floors above. The efforts to control water seepage in Collections Storage Area 1 have also been taken for this room. Again, a more permanent solution to this problem should be sought, or the human skeletal remains collections should be stored elsewhere in a secure and environmentally controlled location.

Environmental Controls

Collections Storage Area 1

Heating and cooling are provided by a central, forced-air system. There is no system for avoiding rapid temperature fluctuations, nor is there any system for monitoring or controlling humidity. Light sources for the rooms in the sub-basements consist of nonfiltered fluorescent tubes.

Collections Storage Area 2

Temperatures are controlled by a central, forced-air heating and cooling system. Humidity is not monitored or controlled. Light is provided by nonfiltered fluorescent tubes and incandescent bulbs in desk lamps.

Pest Management

An integrated pest-management system is not in place at this facility. However, no evidence of pest infestation was noted in the collections storage areas during the site visit. The university provides pest management on an as-needed basis.

Security

Collections Storage Area 1

The door leading from the hallway to Dr. Colten's office is equipped with a dead-bolt lock and an intrusion alarm. The interior doors that lead to the records and artifact storage rooms have key locks. Access to the rooms is controlled by Dr. Colten.

Collections Storage Area 2

The door to Collections Storage Area 2 is equipped with a dead-bolt lock. Access is controlled by Dr. Colten. The room is protected by a security alarm wired to the campus police department.

Fire Detection and Suppression

Collections Storage Area 1

Manual fire alarms in the basement hallway are the only means of fire detection. A sprinkler system and fire extinguishers are present. Manual fire hoses are located in the hallway.

Collections Storage Area 2

Manual fire alarms are located in the hallway outside this collections storage area. A sprinkler system is present in the collections area, but there are no fire extinguishers. Manual water hoses are located in the hallway outside the collections area.

Artifact Storage

Storage Units

Collections Storage Area 1

Archeological collections encompassing approximately 16.1 ft^3 are curated in wood-framed drawer units contained in a painted-wood framework (Figure 107). Each unit measures 2 x 1 x 3 feet (w x h x l), and holds approximately 20 drawers. All storage units are draped with clear plastic sheeting to prevent the collections from incurring water damage from seepage through the foundation

Collections Storage Area 2

Human skeletal remains are curated in wooden drawers within unsealed wooden units (Figure 108). Each unit is approximately 1.5 x 9 x 3 feet (w x h x l), and holds nine drawers. All storage units are draped with clear plastic sheeting to prevent the collections from incurring water damage from see page through the foundation.

Primary Containers

Collections Storage Area 1

Artifact collections are curated in unsealed wooden drawers measuring 2 x 0.3 x 3 feet (w x h x l) (see Figure 107). Drawers are labeled with typed acidic-paper cards inserted in metal label holders. Label information includes accession and site numbers.

Collections Storage Area 2

Human skeletal remains are curated in two sizes of wooden drawers with sealed exteriors and unsealed interiors. The larger drawers measure 0.9 x 0.8 x 2.4 feet (w x h x l), for a total of 1.7 ft^3 per drawer. The smaller drawers measure 0.9 x 0.4 x 2.4 feet, for a total of 0.9 ft^3 per drawer. The larger drawers are used to curate long bones and crania, and the smaller drawers are used to curate smaller and more fragmentary elements. A few drawers are lined with polyfoam. All drawers are labeled with acidic, adhesive labels with information that is either typed or written

Figure 107. Artifacts are curated in a painted wooden cabinet with wooden drawers at UCLA.

in marker. Label information includes accession, drawer, and site numbers and notes on the contents. Colored, adhesive dots are used on each drawer to "color code" them.

Secondary Containers

Collections Storage Area 1

Archeological materials in drawers are housed in various types of containers. Refer to Table 21 for a summary of these containers. Plastic bags are 2-mil, zip-lock; acidic-cardboard boxes and box halves are used as trays; glass vials have cork stoppers. Labels on secondary containers include direct labels in marker on 2-mil, zip-lock, plastic bags, plastic vials, acidic-paper inserts in marker or pen in acidic-cardboard boxes used as trays, and adhesive labels in marker on glass vials. Label information includes accession, field, catalog, site, and provenience numbers and contents. Approximately 32 percent of the archeological materials are stored loose in the drawers.

Collections Storage Area 2

Human skeletal remains were formerly curated loose in the drawers, but individual elements were being placed in 4-mil, zip-lock bags during the site visit. The bags are directly labeled in marker with accession, burial, and site numbers.

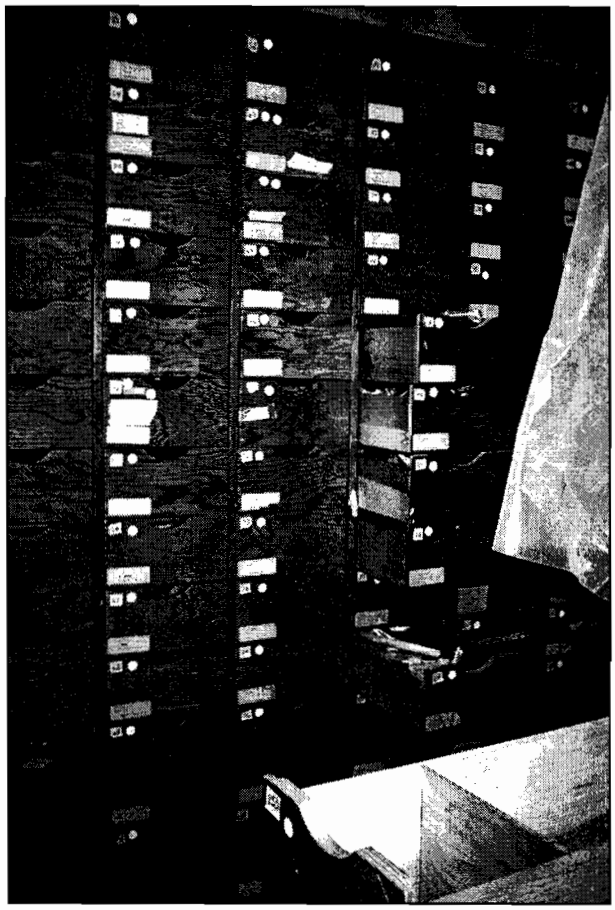

Figure 108. Human skeletal remains are stored in wooden drawers at UCLA.

Table 21. Summary of Secondary Containers Used to House San Nicolas and San Miguel Islands Collections at UCLA, by Percentage

Secondary Container	San Nicolas Island (%)	San Miguel Island (%)	Total (%)
Plastic bags	54	—	54
Loose in container	30	5	28
Acidic-cardboard trays	11	95	13
Glass and plastic vials	5	—	5
Total	100	100	100

Note: Percentages based on total ft^3 of materials in the collection.

Laboratory Processing and Labeling

Collections Storage Area 1

With the exceptions of soil samples and extremely fragile items, all archeological materials have been cleaned. Most San Nicolas Island artifacts are individually labeled directly on the surface of the artifact in ink. Label information includes accession, catalog, and site numbers. Archeological materials are sorted first by provenience and then by material class. Bone, shell, and other fragile specimens are generally kept in the same drawers by site, while flaked- and ground-stone artifacts are curated together by provenience. These practices vary with each site according to percentages of material classes.

Collections Storage Area 2

All human skeletal remains have been cleaned and sorted by accession and burial numbers. Each element is labeled directly in ink with accession, catalog, burial, and site numbers.

Human Skeletal Remains

Human skeletal remains were collected from San Nicolas Island between 1950 and 1959. The majority of these were recovered from eroded sites during surface surveys, not from systematic excavations. Sue Ellen Gald, a physical anthropologist, has been retained by UCLA to rehabilitate their human skeletal remains collection. At the time of our visit, Gald was rehabilitating the San Nicolas Island human skeletal remains collection. There are approximately 60 large drawers and 10 small drawers containing San Nicolas Island human skeletal remains, for a total of approximately 100 ft^3. It was estimated that there are approximately 50 individuals in the human skeletal remains collection.

Records Storage

The records-storage room is small, encompassing 88 ft^2 within Collections Storage Area 1. Less than 1 linear foot of associated documentation is curated in standard, steel file cabinets positioned along the walls (Figure 109). File cabinets are draped with clear plastic sheeting to protect the documentation collections from water seepage.

Paper Records

Paper records are curated in acidic-paper file folders within a standard, letter-size, steel file cabinet. Drawers in the file cabinet are labeled with slips of acidic paper and adhesive tags written in marker. Some records are stored in loose-leaf acidic binders with metal clips. Contaminants such as metal clips, which are showing signs of oxidation, are present. There are no duplicates, and all documentation is on acidic paper.

Associated documentation from San Miguel Island consists of one binder containing catalog sheets from Accession 171. Records are preprinted forms mimeographed on acidic paper, with data entered in ink. The binder is stored in an acidic-paper file folder in a file cabinet. The folder is labeled directly in ink. These records are dated from June 1 to June 3, 1976, and amount to 0.5 linear inches.

Figure 109. Less than 1 linear foot of associated records from Naval shore facilities is being curated in metal file cabinets at UCLA.

Associated documentation from San Nicolas Island consists of accession and burial records and field notes. All are on acidic paper. These records are mimeographed forms with data entered in pen and pencil. The records are stored in acidic-paper folders in a file cabinet. The folder is legibly labeled in ink. These records date from January 1, 1951, to December 31, 1962, and total 4 linear inches. The records have been contaminated with metal clips that are showing signs of oxidation. There are no duplicates, and all documentation is on acidic paper.

Photographic Records

The St. Louis District team did not observe any photographic records.

Maps and Oversized Documents

Cartographic records are stored in file cabinets within the records storage room. Less than 1 linear inch of maps and drawings is stored in acidic-paper file folders that are labeled directly in ink.

Collections-Management Standards

Registration Procedures

Accession Files

Accession files are maintained; they are stored in file cabinets located in Collections Storage Room 1.

Location Identification

The physical location of the collections is noted in the curator's files.

Cross-Indexed Files

Files are partially cross-indexed.

Published Guide to Collections

No guide to the collections has been published.

Site-Record Administration

A trinomial site-numbering system is used.

Computerized Database Management

Artifact catalogs are entered into a computerized database system, Paradox for Windows.

Written Policies and Procedures

Minimum Standards for Acceptance

A written policy has not been established. Archeological collections are no longer generally accepted, but exceptions have been made for researchers from the university and when small collections from the local area were given to the museum.

Curation Policy

A written curation policy is not in place.

Records-Management Policy

A written records-management policy is not in place at this time.

Field-Curation Procedures

No written field-curation guidelines have been established.

Loan Policy

There is no written loan policy.

Deaccessioning Policy

There is no written deaccessioning policy.

Inventory Policy

No written inventory policy is in place.

Latest Collection Inventory

The date of the last comprehensive inventory is not known.

Curation Personnel

Dr. Roger Colten is the curator of archaeology.

Curation Financing

Curation is financed through the Anthropology Department budget.

Access to Collections

Access to collections is controlled by Dr. Colten.

Future Plans

Future plans include moving the collections from the sub-basement in Haines Hall to a room in the Fowler Museum on the UCLA campus, which has better environmental controls and is better suited for the curation of archeological collections.

Comments

1. The greatest concern about the collections at Haines Hall is the risk of future water damage to collections from leaks in the foundation.

2. Funding is inadequate to curate archeological collections from San Nicolas and San Miguel Islands in accordance with federal guidelines.

3. Collections are secure from fire and theft but, environmental conditions need to be improved in both collections storage areas.

4. The collections storage areas have reached maximum capacity.

5. No standard pest-management program has been implemented in the facility.

6. All of the artifact collections are stored in substandard primary and secondary containers.

7. The human skeletal remains collections are currently being inventoried and rebagged.

8. Most San Nicolas and San Miguel Islands artifacts have been labeled directly in india ink.

9. Storage of associated documentation does not meet modern archival-preservation standards.

10. All necessary registration procedures are in place, but no written policies have been produced.

Recommendations

1. Repair the damaged foundation under Haines Hall or move collections to a drier and more environmentally stable repository.

2. Procure funding to adequately curate EFA West collections in accordance with federal guidelines, as outlined in 36 CFR Part 79.

3. Install an HVAC system to control temperature and humidity. Monitor humidity, and install a dust-filtration system in all collections storage areas.

4. Provide more dedicated space for collections storage.

5. Implement a professional, integrated, pest-management program for the facility.

6. Replace current secondary containers with 4-mil, zip-lock, polyethylene bags, and label these with indelible ink. Labels for secondary containers should be made from spun-bonded, polyethylene paper (e.g., Nalgene polypaper) written in indelible ink and inserted into the secondary containers.

7. Place the rebagged artifacts in acid-free cardboard boxes. Place adhesive, polyethylene label holders with acid-free inserts in the boxes. Labels should no longer be written directly on the boxes. When label information or box contents change, inserts can be replaced, thus reducing the chance for conflicting and confusing information.

8. Primary containers should be placed on enameled, metal shelving units.

9. Ensure that all artifacts have been inventoried and labeled directly with india ink to prevent information loss if artifacts are separated from provenience information.

10. Remove all contaminants from original documentation.

11. Duplicate all paper records onto acid-free paper and place in acid-free folders labeled in indelible ink. Place all folders in acid-free boxes that have adhesive, polyethylene label holders with acid-free paper inserts.

12. Duplicated documentation should be stored in a separate, fire-proof, secure location.

13. Store maps and oversized documentation in flat map-storage cases for long-term curation.

14. Arrange associated documentation according to modern archival procedures and create a finding aid for the documentation.

15. Develop and implement minimum standards for acceptance, a comprehensive curation policy for documentation and artifacts, a records-management policy, field-curation guidelines, and loan, deaccessioning, and inventory policies.

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University of California, Santa Barbara

Repository Summary

Collection Origin: San Miguel Island

Volume of Artifact Collections: 70.5 ft^3
Compliance Status: Collections will require partial rehabilitation to comply with existing federal guidelines and standards for curation.

Linear Feet of Records: < 1 linear foot
Compliance Status: Associated documentation will require complete rehabilitation to comply with current federal guidelines and modern archival-preservation standards.

Human Skeletal Remains: 3 ft^3
A minimum of four individuals recovered from San Miguel Island is curated within North Hall in the Physical Anthropology Laboratory.

Status of Curation Funding: Curation is through UCSB and through the Department of Anthropology. Funding is insufficient.

Date of Visit: November 30, 1993

Points of Contact: Karen Rasmussen, collections manager, and Susan Siefkin, assistant curator

UCSB houses archeological collections from San Miguel Island, which is under the administrative jurisdiction of NAWS Point Mugu. Two individuals are responsible for the physical care and storage of these collections. The human skeletal remains have been separated from the rest of the collections, and their physical care and research are the responsibility of Dr. Philip Walker, physical anthropologist. The remains are stored in his laboratory and are studied and processed by he and his students. The office and collections storage area for the Repository for Archaeological and Ethnographic Collections is also located in North Hall, directly across from the Physical Anthropology Laboratory. The staff of the repository are responsible for collections located in an off-campus, inactive storage facility. Despite the separation of the collections, the basic collections-management standards and written policies and procedures established by the Repository for Archaeological and Ethnographic Collections are followed by both responsible sections. Both sections are subsumed under the Department of Anthropology at the university.

Two repositories with a total of three separate storage areas house the collections. North Hall (Repository 1), is on the UCSB campus; however, an off-campus storage facility for inactive collections also exists (Repository 2). Within Repository 1 there are two separate collections

Figure 110. Exterior view of North Hall at UCSB.

storage areas. Collections Storage Area 1, the Repository for Archaeological and Ethnographic Collections, located in Room 1110. Collections Storage Area 2, across the hall from Room 1110, is the Physical Anthropology Laboratory, under the direction of Dr. Phillip Walker.

Assessment of Repository 1

Repository 1, approximately 21–30 years old, is located on the UCSB campus (Figure 110). The 1,093 ft^2 structure serves as a university classroom, laboratory, office, and collections storage area. The Physical Anthropology Laboratory, Repository for Archaeological and Ethnographic Collections, Collection Manager's office, and collections storage areas are located in this repository. Human skeletal remains are stored in the Physical Anthropology Laboratory. The only documentation assessed was that stored in the North Hall, Room 1110, collections storage area.

Structural Adequacy

The two-story building has a concrete foundation and reinforced, concrete-block walls. The clay-tiled roof is original to the structure. The floor is concrete with an asphalt tile, and interior walls are poured concrete. The ceiling is drop-acoustical tile. No known renovations have been made to the structure.

Collections Area 1

Most of the artifacts and records collections are kept behind a cage-like fence (Figure 111). The majority of the storage units are large, wooden cabinets. Metal filing cabinets, a study table, and some office furniture are also present. The assistant's office is located within this collections area. Collections Storage Area 1 also contains other activity areas, such as an artifact processing lab, an artifact and records study area and a small, connecting office for the assistant curator. The room is filled to 100 percent capacity.

Earthquake-safety measures taken include bolting cabinets and shelving units to the walls, floors, and each other. Metal bars slide through the front of the units to keep the drawers from opening.

Collections Area 2

The ceiling, walls, and floor are identical to those in Room 1110. A single, solid-wood door leads to a central hall. The space is divided by cabinets and bookshelves. Dr. Walker's office and working space for his assistants are located here. Furniture, equipment, and a study table are

present. The room is filled to capacity; boxes and equipment clutter the room. Human skeletal remains are stored in the wooden cabinets.

Environmental Controls

Environmental controls are identical for both Collections Storage Areas 1 and 2. There is no HVAC system, and humidity is neither monitored nor controlled. The west wall is lined by windows with steel frames; the windows are covered by shades. Lighting is accomplished by nonfiltered fluorescent lights.

Pest Management

Staff rely on the university for pest management; the procedures are unknown. Staff cleans collections areas weekly.

Security

Security measures include a daily inspection of the structure by campus security. Both collections storage areas have solid, wooden doors leading to the hallways. All doors have key and dead-bolt locks. Interior doors to Collections Storage Area 1 are also solid wood with key and dead-bolt locks for the office and for the collections storage space behind the metal cage wall. Only the curatorial staff have keys to these doors. Windows line the exterior walls of both collections storage areas. The bottom portions of the windows can be opened to 45°. These windows have latch locks.

Fire Detection and Suppression

Fire-detection equipment consists of a manual fire alarm in the hallway outside the collections storage areas. The only fire-suppression equipment present was fire extinguishers located in the hallway outside of the collections storage areas.

Artifact Storage

San Miguel Island artifacts supposedly located in Repository 1 were not found by the St. Louis District team.

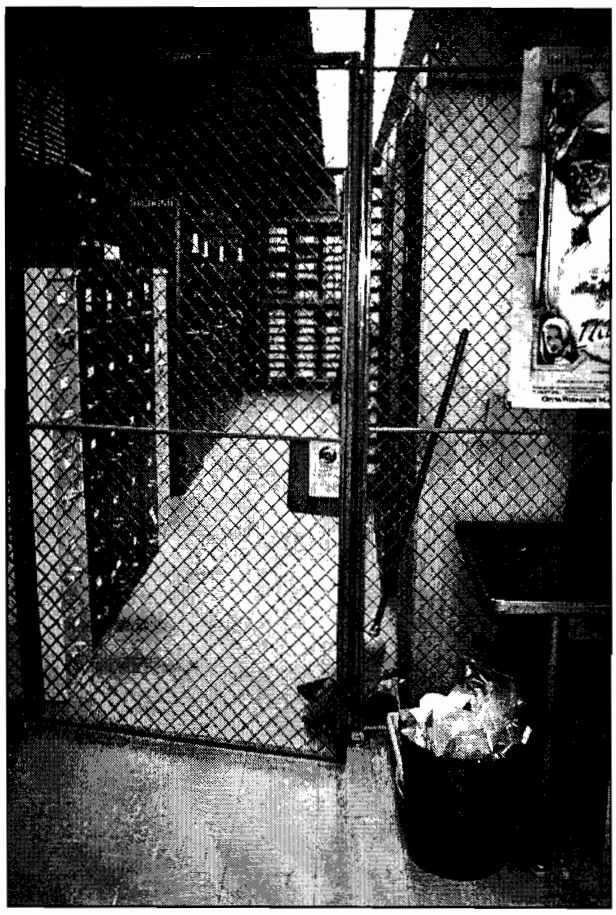

Figure 111. Archeological collections in Collections Area 1 at UCSB are kept behind a secured fence.

Storage Units

Storage units (Figure 112) within Repository 1, Collections Storage Area 2, are wooden cabinets with locking doors. The cabinets measure 4 x 7 x 2 feet. Each unit has two doors and contains two shelves. Standard-size boxes are stacked in twos and threes within the cabinets. Boxes are also stacked on top of the units.

Primary Containers

Primary containers in Repository 1, Collections Storage Area 2, for human skeletal remains are stapled, acidic, cardboard boxes measuring 10 x 7 x 7 inches (see Figure 112). The lids are stapled and telescoping. Labels are typed with accession and burial numbers, and frequently with a short description of the box contents. These adhesive labels are taped to the boxes.

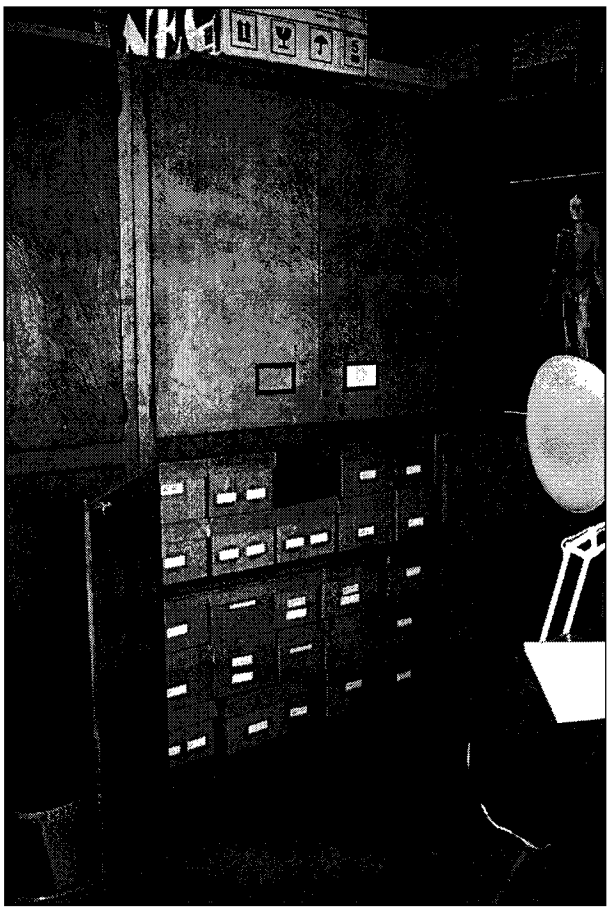

Figure 112. Storage units in Collections Storage Area 2 at UCSB are wooden cabinets with wooden shelves.

Laboratory Processing and Labeling

In Repository 1, Collections Storage Area 2, collections have been cleaned and directly labeled with india ink.

Human Skeletal Remains

All of the human skeletal remains are curated in Dr. Walker's laboratory within Repository 1, Collections Storage Area 2. Three boxes, each measuring 10 x 7 x 7 inches, contain a total minimum number of four individuals. Storage Units are wooden cabinets with sets of two double doors. The primary containers are acidic-cardboard boxes that are folded and stapled. Labels include accession and burial numbers, and many include a short description of the contents. The remains are wrapped in nonarchival bubble wrap.

Records Storage

All documentation is housed in Repository 1, Collections Storage Area 1. All records are stored in a metal filing cabinet. This cabinet is labeled, on an acidic-paper tag in the metal label holder, with the series of accession records within each drawer. These six letter-size cabinets each measure 28.5 x 15 x 58.5 inches. The drawers are equipped with locks. Cabinets are located in the caged-in storage area. Finding aids for the records, organized by accession number, are available. Some of the records are yellowed and brittle.

Paper Records

Paper records include three inches of accession records from SMI 348 (dated 1982), 0.5 inches of survey records, one inch of field notes, and 1.5 inches of computer printouts of catalog information for collections. These records are all stored in acidic-paper folders. Contaminants such as paper clips and staples were present. Records were both loose and bound, and have labels that are typed and adhesive or have been labeled directly with a marker.

Photographic Records

A small collection of slides was located in the accession files. These are not archivally stored or processed. No log sheet was available.

Maps and Oversized Documents

A few small-scale maps, on acidic paper, were filed with the accession records.

Assessment of Repository 2

Repository 2 is a single-story, off-campus storage building. The Art Museum and Center share an area within this 10-year-old building. Other departments rent storage spaces within the building. The center uses this repository for the storage

of inactive, generally bulky collections. The collections storage areas are divided by a wall made of woven-metal wire. The majority of all artifact collections are stored at this location. Only archeological materials were observed here.

Structural Adequacy

The foundation of the structure is concrete, the exterior walls are stucco, and the roof is asphalt. The square footage of the entire structure was unknown, but an area measuring 2,000 ft^2 is evenly divided between archeological storage and Art Museum storage by a plywood-and-metal-mesh wall with a door. The area contains rows of shelving units, which also line the walls. Interior walls are composed of plasterboard. The ceiling is exposed insulation in framing, and the floor is concrete. An aluminum-framed window, original to the structure, faces north; an identical window faces south. Each window unit measures approximately 47 x 94 inches. Each unit has three panels, with one fixed and the other two sliding. Both windows are equipped with ultraviolet filters. No evidence of any leakage was noted. All windows are accessible from the ground. There is an exterior, metal panel door on each of the two exterior walls—one on the art side and one on the archeology side. An overhead loading door is adjacent to the doors on each side. All of the collections are archeological, and they fill the room to 90 percent capacity.

Environmental Controls

A central, mechanical ventilation system is the only environmental control. Humidity is neither monitored nor controlled. There is no targeted range for temperature or humidity. Windows have ultraviolet filters, but artificial lighting is by means of nonfiltered fluorescent bulbs.

Pest Management

There is no pest management program for Repository 2. Some spiders were observed by the St. Louis District team. The collections area is maintained weekly by the curatorial staff.

Security

Security measures include one key lock and one dead-bolt lock on the single, steel door. Curatorial staff from the art and archeology departments have access. The loading door on the archeology side is chained for security and is blocked with collections on the interior.

Fire Detection and Suppression

Repository 2 contains a sprinkler system for fire suppression. There is no fire-detection system.

Artifact Storage

Storage Units

Storage units are large adjustable shelving units composed of metal and wood (Figure 113). Collections in Repository 2 are stored on two different types of metal shelving units. One type contains four shelves and measures 30 x 97 x 48.5 inches. The other type has six shelves and measures 96.5 x 24 x 21 inches. Sixteen of these units constitutes the archeological storage space.

Primary Containers

Primary containers are standard, acid-free boxes with telescoping lids (see Figure 113). Containers have a folded construction and are directly labeled in red marker with information including the accession, box, and site numbers.

Secondary Containers

Secondary containers include a combination of 2- and 4-mil plastic bags that have been secured with staples. Bubble wrap is the only other packaging material used for the human skeletal remains from San Miguel.

Laboratory Processing and Labeling

Collections are clean but have no direct labeling. Preprinted, acidic labels have been inserted in each secondary container and are labeled with pencils, pens, or markers. Most of the San Miguel Island collections consist of shell, lithics, and faunal remains (Table 22). Other materials include soil and ^{14}C samples.

Figure 113. Storage units in Repository 2 are metal and wood shelving.

Human Skeletal Remains

No human skeletal remains are being curated in Repository 2.

Records Storage

Associated documentation is not stored in Repository 2. Refer to the assessment of Repository 1, above, for a discussion of records storage at UCSB.

Assessment of Both Repositories

Collections-Management Standards

Registration Procedures

Accession Files

All materials are accessioned upon receipt. A computer-generated accession form exists for the artifact and associated documentation collections. Accession information detailed on the artifact collection form includes project information, artifact information, and documentation information.

Location Identification

Physical location of artifacts is provided in the database.

Cross-Indexed Files

Files are cross-indexed.

Published Guide to Collections

No published guide to the collections exists.

Site-Record Administration

A trinomial site-numbering system is used.

Computerized Database Management

Two database-management systems are used.

Written Policies and Procedures

Minimum Standards for Acceptance

Standards for acceptance outline the eligibility of accepted materials, systematic exclusion of certain materials, region of interest, and prioritization of access to storage space. Human skeletal remains are accepted upon written approval from the affected Native American group. Bulk shell and fire-affected rock are generally not accepted because of space limitations. Collections

Table 22. Summary of Material Classes Present in Repository 2 at UCSB, by Percentage

Material Class	%
Lithics	8
Faunal remains	10
Shell	69
Soil	5
^{14}C	1
Mixed	2
Other	5
Total	100

Note: Percentages based on total ft^3 of materials in the collection.

are usually restricted to those originating in Santa Barbara and San Luis Obispo Counties.

Curation Policy

A curation policy was in the process of being written at the time the assessment was conducted.

Records-Management Policy

Records are filed by accession number and are maintained through a check-out system. No formal document outlining these procedures has been produced.

Field-Curation Procedures

Procedures are presented in *Procedure for the Submission of Archaeological Collections for Curation,* issued by the Repository for Archaeological and Ethnographic Collections of the Department of Anthropology at UCSB. Collections must be given accession numbers, and artifacts and documentation must be properly processed, packaged, organized, and cataloged.

Loan Policy

A computer-generated loan form exists, and the loan policy is currently being standardized.

Deaccessioning Policy

A deaccessioning policy has not been written.

Inventory Policy

An inventory policy is currently being written.

Latest Collection Inventory

An inventory is currently taking place.

Curation Personnel

Curation personnel at the Repository for Archaeological and Ethnographic Collections include Dr. Glassow, a faculty member with curatorial responsibilities; Karen Rasmussen, a graduate student working as a part-time collections manager; and one to two interns during each quarter earning undergraduate credit. Personnel in the Physical Anthropology Laboratory include Dr. Phillip Walker, Susan Siefken, and another assistant.

Curation Financing

Curation is financed through the UCSB and by the Department of Anthropology. Funding has been inadequate.

Access to Collections

Artifact collections are accessible through the collections manager. Students wanting access must make arrangements through their professors. Individuals outside UCSB must have legitimate requests for access. Access to the human skeletal remains collections must be requested through Dr. Walker or one of his assistants. Access to the artifact collections under the care of the collections manager at the Repository for Archaeological and Ethnographic Collections must be made through the collections manager.

Future Plans

Future plans include hiring a full-time curator and a part-time assistant and procuring funds to rehabilitate all collections to federal standards. A new curation facility is under construction.

Comments

1. Because of a lack of funding, no duplicates of records have been produced.

2. Artifacts are not easily accessed.

3. Neither facility has adequate environmental, fire-safety, and security controls to protect their archeological collections.

Recommendations

1. Photocopy all documentation on acid-free paper, and store in acid-free file folders or on microfilm. Store the duplicates in a separate, fireproof, secure location. Remove contaminants such as paper clips and staples.

2. Identify all associated and unassociated funerary objects, sacred objects, and objects of cultural patrimony as defined by NAGPRA and determine their disposition.

3. Institute policies for curation.

4. Identify all human remains in the collections and determine their disposition.

5. Construct a secure wall in Repository 2 to separate the art collection and archeological storage areas to eliminate unauthorized access to the collections.

6. Install humidity monitoring and control devices in both repositories.

7. Develop a reliable pest-management system that includes regular monitoring.

8. Upgrade the fire-suppression system in the collections storage areas by installing a sprinkler system.

9. Develop an emergency-management plan.

10. Place slides in polyethylene sleeves.

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University of Nevada, Reno

Repository Summary

Volume of Artifact Collections: < 1 ft^3

Collection Origin: NAS Fallon
Compliance Status: Collection will require complete rehabilitation to comply with existing federal guidelines and standards for curation.

Linear Feet of Records: 2.2 linear feet
Compliance Status: Records will require complete rehabilitation to comply with current federal guidelines and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: Curation is funded by curation fees, an endowment fund, matching grants, and university overhead. Current funding is inadequate for curation activities.

Date of Visit: February 22, 1994

Point of Contact: Donald Hardesty, curator of archaeology

The museum (Repository 1) at UNR curates associated documentation and a single lithic artifact from NAS Fallon. Two faculty curators manage the museum and the archeological and ethnographic collections. All records are kept in the archives room, which is located on campus in the Business Building. Artifacts are stored in an off-campus facility (Repository 2), the Stead Building (Figure 114), except when they are being processed or are considered perishable. The collections have resulted from faculty research, field schools, and from outside agencies.

Assessment of Repository 1

Repository 1 is in the Business Building, which houses the museum office and the records storage room. The museum has been in its present location since 1980.

Structural Adequacy

The Business Building was built on pillars, in 1980, in an attempt to protect the structure from earthquake damage. The exterior is brick, and the foundation is concrete. The roof, original to the structure, is built-up asphalt. The floor of the records-storage room is carpet-covered concrete. The interior walls are painted, concrete blocks and plastered plasterboard. The ceiling is constructed of suspended acoustical tiles. There have been no structural renovations. There are

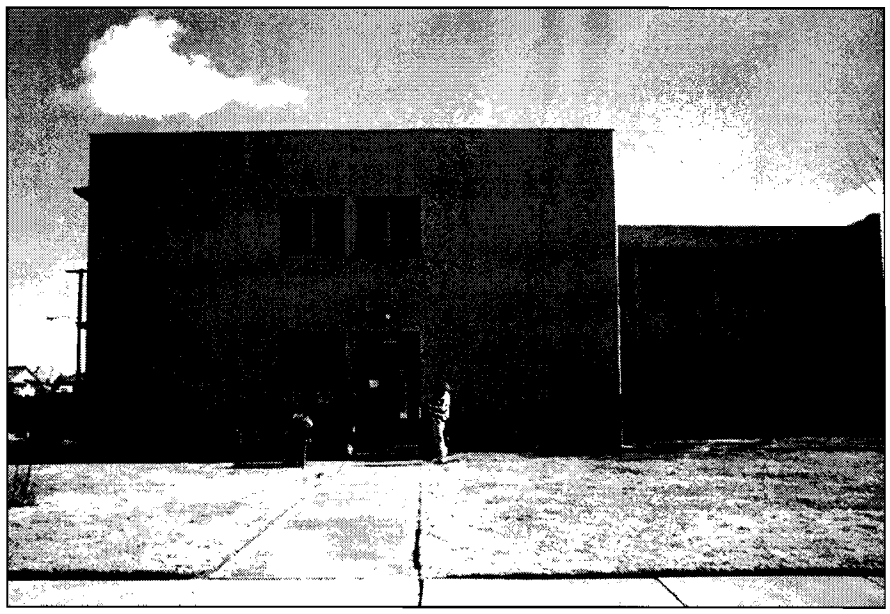

Figure 114. The Stead Building is used for archeological storage, classrooms, and offices.

six floors, all above ground. Support and utility systems include plumbing, electrical and heating; these systems are original to the structure. The Business Building include classrooms, a computer facility, laboratories, offices, and the museum.

Environmental Controls

Temperature is controlled by thermostats in each room, which regulate the central heating and air-conditioning. Humidity is not monitored, and temperature and humidity ranges are unknown. Dust filters are in place. The building is regularly maintained by the university. No windows are present in Room 505 where the associated records are stored. Lighting is accomplished by nonfiltered fluorescent bulbs.

Pest Management

There is no integrated pest-management system in place. Periodic monitoring occurs, but it is not regular nor is it employed concurrent to a means of control. Staff members have observed no pest activity over the past 15–20 years.

Security

Security measures for the collections storage area include a dead-bolt lock, a key lock, motion detectors, and access controlled by staff. Drawers are locked. University police make regular patrols of campus buildings.

Fire Detection and Suppression

Fire-suppression equipment consists of a sprinkler system located throughout the building and a fire extinguisher located in a locked case in the hallway outside the collections storage room.

Artifact Storage

Collections awaiting processing are stored in a temporary storage area within Repository 1. Refer to the assessment of Repository 2, below, for a discussion of artifact storage at this facility.

Laboratory Processing and Labeling

The single artifact from NAS Fallon is housed in Repository 2. Refer to the assessment of Repository 2, below.

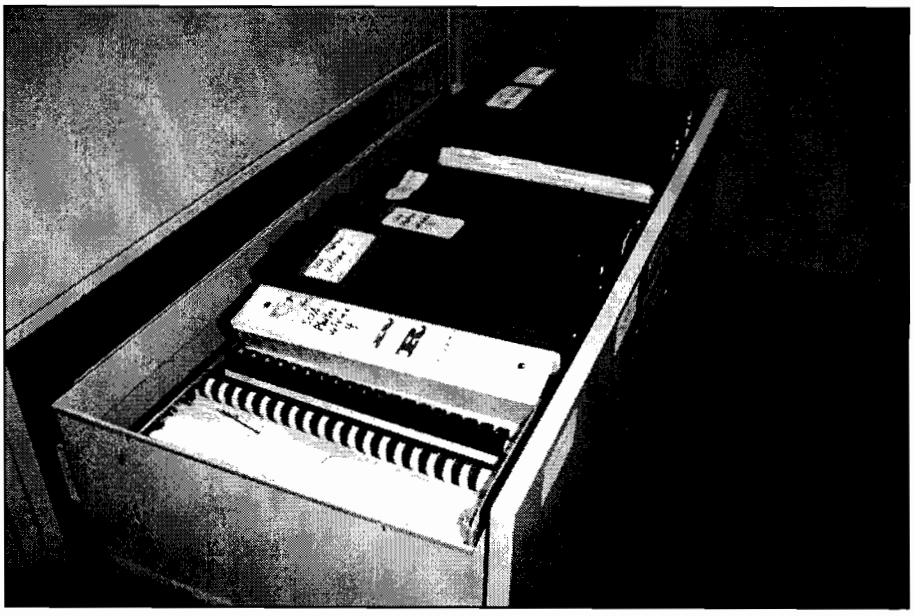

Figure 115. Associated records are stored in lateral file cabinets in Room 505 of the Business Building at UNR.

Human Skeletal Remains

No human skeletal remains were assessed at this facility.

Records Storage

Records are stored in Repository 1, Room 505. The storage units are lateral filing cabinets measuring 18 x 36 x 65 inches (Figure 115). Drawer labels are written in pen and marker on acidic paper. Each label is either taped to a drawer or inserted into a plastic label holder. The range of the dates is 1986–1989.

Paper Records

Paper records include 1 linear inch of administrative records and 7.5 linear inches of site records stored in plastic three-ring binders. The binders are labeled with acidic-paper tags, bearing information written in black marker, taped to the binders. All are on acidic paper, and no duplicates have been produced.

Photographic records

Photographic records include 1 linear foot of black-and-white prints, contact sheets, and negatives, which are stored in a three-ring binder in archival plastic sleeves (Figure 116). Black-and-white, 8-x-10-inch photographs are stored in nonarchival three-ring binders. The prints are labeled directly in pencil and in marker on their backs. Photo logs are included.

Reports

Report records include 4.5 linear inches of reports and a draft report from work on NAS Fallon. These were stored with contaminants such as rubber bands and staples, were bound with nonarchival plastics and metals, and encased in acidic-paper folders.

Assessment of Repository 2

Repository 2, the Stead Building, houses the artifacts in "dead storage." The structure was once a part of a military installation and was given to UNR.

Structural Adequacy

This repository has a concrete foundation and exterior walls of concrete block. The asphalt roof is reported to be well maintained, having

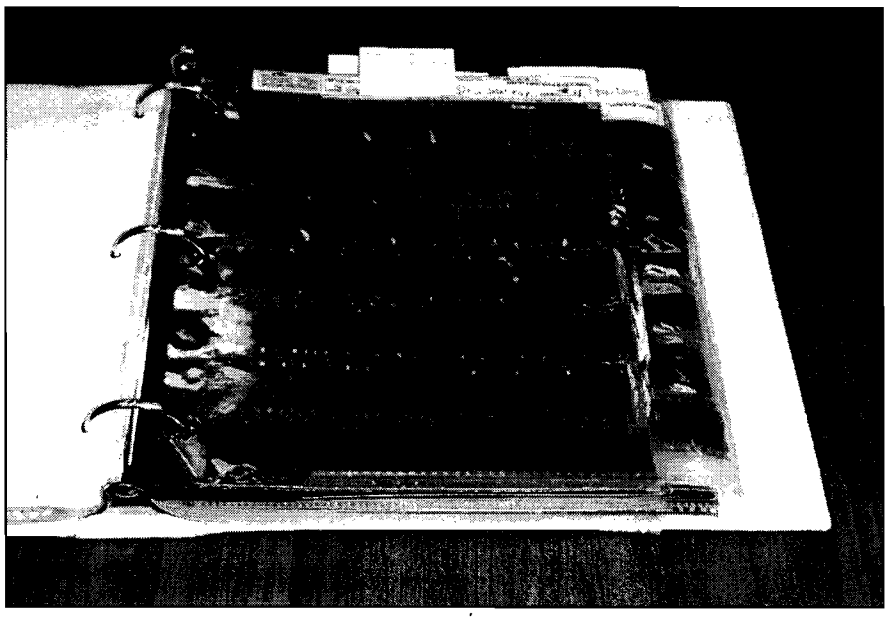

Figure 116. Photographic negatives are stored in archival-quality negative sleeves in three-ring binders at UNR.

undergone several re-roofings. No cracks were apparent, but a water stain was noted on the ceiling of the collections storage area. There are two tiled floors, both aboveground; floor tiles in the collections storage area are loosening. The interior walls and ceiling are composed of plaster and wood. No internal or external renovations have been made. The Stead Building is currently used as an office building for the physical plant, classrooms, and a repository.

Environmental Controls

The environment is controlled by a hot-water heating system and a refrigeration air-conditioning system. Temperatures range between 60 and 80°F. All systems are turned off during weekends except during periods of extremely hot or cold weather. Humidity is neither monitored nor controlled, but a physical plant engineer estimates that the average is normally 15–20 percent; the humidity is estimated to reach 60–65 percent when it is raining. Environmental-control systems are equipped with dust filters. The building is regularly maintained five days a week by a custodial and facilities staff, who are on call over the weekends.

Windows surround the building on both floors and line the south and west walls of the collections storage room. The steel-framed windows are original to the structure and measure 5 x 5 feet. No evidence of air or water leakage through the windows was observed during the site visit. Windows in the collections storage room are equipped with venetian blinds. Fluorescent and natural light illuminate the facility. No ultraviolet filters have been employed. Overhead pipes are present in the collections storage room.

Pest Management

There is no integrated pest-management system for either repository. Intermittent monitoring occurs, but it is not regular and not employed concurrent to a means of control. Staff members have observed no pest activity over the past 15–20 years.

Security

Security measures for this repository include key locks for the doors and window locks. Access is controlled by the curator. People wishing

to see collections are supervised by the curator or the graduate assistant. Only museum and janitorial staff have keys to this repository. A night watchman patrols the building. No episodes of unauthorized entry have been reported. Doors are solid-core wood.

Fire Detection and Suppression

A sprinkler system is the primary means of fire suppression. Manual fire alarms are located in the halls for fire detection.

Artifact Storage

Storage Units

Storage units (Figure 117) include adjustable, open shelving units of both baked enamel on metal and wooden shelves with metal supports.

Primary Containers

Primary containers for artifacts include nonarchival, cardboard boxes with folding lids.

Secondary Containers

The secondary container for the artifact is a 2-mil, zip-lock bag with a label written on it in indelible ink.

Laboratory Processing and Labeling

The single lithic artifact was cleaned, and labeled with indelible ink.

Human Skeletal Remains

No human skeletal remains were assessed at this facility.

Records Storage

No records are stored in Repository 2. Refer to the assessment of Repository 1, above, for a discussion of records storage at this facility.

Assessment of Both Repositories

Collections-Management Standards

Registration Procedures

Accession Files

All materials are accessioned upon receipt. A backlog of not-yet-accessioned materials is currently being accessioned.

Location Identification

The physical location of the collection is identified within the accession files.

Cross-Indexed Files

Files are cross-indexed by accession, site, and project numbers.

Published Guide to Collections

No guide to the collections has been published.

Site-Record Administration

The Smithsonian Trinomial site-numbering system is used.

Computerized Database Management

Fox Base, a dBASE-compatible program, has been used to develop a program to manage the archeological and ethnographic collections.

Written Policies and Procedures

Minimum Standards for Acceptance

Minimum standards for acceptance include compliance with field-curation guidelines and payment of a $500-per-ft^3 curation fee.

Curation Policy

Curation policies are outlined in a comprehensive, written plan that includes rules for accessibility, conditions of storage, and eligibility of artifacts for acceptance.

Records-Management Policy

Records-management policies are addressed in the curation policy.

Figure 117. Storage units in the Stead Building consist of wooden shelves (background) and metal shelves, visible on the left.

Field-Curation Procedures

Guidelines have been created. Collections must be cleaned, labeled, cataloged, and properly packaged. Copies of any associated documentation must accompany the collection.

Loan Policy

Loan procedures are established; a loan form must be completed. Loan agreements are accepted from museums and other institutions constructing exhibits, graduate students for research, and federal agencies for research on follow-up projects. The curator must authorize loans. Private individuals cannot borrow materials.

Deaccessioning Policy

Deaccessioning policies are in place. Deaccessioning an artifact must be approved by a committee and the curator.

Inventory Policy

An inventory policy is in place. Inventories are performed annually.

Latest Collection Inventory

Collections are currently undergoing an inventory during the computerization of the records collections.

Curation Personnel

Curation personnel include Don Hardesty, curator of archaeology; Catherine Fowler, curator of ethnology; and a graduate research assistant who works 20 hours per week. Frequently an undergraduate student is employed part-time and works under the supervision of the research assistant.

Curation Financing

Curation is financed through a curation fee of \$500 per ft^3 of material. University field schools and faculty members performing research are expected to obtain matching funds for curation fees. The unpaid amount of the curation fees is absorbed in overhead funds. Physical maintenance of the facilities is also financed through university overhead. Curators are faculty members whose curation duties are unpaid. A small private endowment, the Kitselman Fund, provides funds for a graduate student to work part time for the museum.

Access to Collections

Access to the collections can be obtained through a written request to the curator. Arrangements must be made for the curator or the graduate assistant to supervise the visitor.

Future Plans

Future plans include moving collections from Repository 2 to another building to reduce overcrowding. Other plans include installing more storage racks for easier access to collections, continuing the accessioning of backlogged artifacts, and the computerization of all records collections.

Comments

1. Curators have created written policies and procedures for managing collections.

2. Curators have implemented curation fees.

3. Curators have created and use a database-management computer program to manage their collections.

4. Overcrowding in collections storage areas needs to be alleviated to increase accessibility.

5. Environmental- and fire-control systems must be upgraded in both repositories.

6. An integrated pest-management program has not been developed and implemented.

Recommendations

1. Employ a full-time curator.

2. Develop an emergency-management plan.

3. Follow through with plans to install additional storage units in order to relieve overcrowding problems.

4. Have the water-stained area of Repository 2 inspected and repair the source of the problem.

5. Install environmental controls and monitoring devices in Repository 2.

6. Duplicate paper records onto archival paper and store in a separate, fireproof, secure location.

7. A dead-bolt lock should be added to increase security at Repository 2.

8. A pest-management plan addressing monitoring and control methods should be put in place at both repositories.

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Thomas Burke Memorial Washington State Museum

University of Washington, Seattle

Repository Summary

Volume of Artifact Collections: 16 ft^3

Collection Origin: NAS Whidbey Island and WPNSUPFACSBDET Port Hadlock

Compliance Status: Artifact collections will require some rehabilitation to comply with existing federal guidelines and standards.

Linear Feet of Records: < 1 linear foot

Compliance Status: All associated documentation will require complete rehabilitation to comply with current federal guidelines and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: Curation activities are not adequately funded at this institution. Current funds are acquired from the museum budget, grants, and a small endowment fund.

Date of Visit: September 27, 1994

Points of Contact: Dr. Julie Stein, curator of archaeology; Laura Phillips, collections manager; Mary Parr, collections manager; and Judith Sterling, assistant facilities manager

The Burke Museum was founded in the late 1800s by a group of men called the Young Naturalists. The Burke Museum (Figure 118) moved to its present location on the University of Washington, Seattle, campus in 1962. Built to house the museum, the structure has gallery and exhibit areas, laboratories for each section (e.g., archeology, ethnology, geology, and zoology), office space, collections storage areas, and classrooms. Federal collections housed at this repository include 15 ft^3 of artifacts and associated documentation from NAS Whidbey Island sites 45IS41 (collected by A. L. Bryan), 45IS81 (collected by Dr. Julie Stein), and WPNSUPFACSBDET Port Hadlock sites 45JE6 and 45JE7 (donated by G. L. Coale).

Assessment

The Burke Museum was originally constructed in 1962, as a structure to house the museum. It is a three-story structure, with two floors above ground and one below. The building encompasses approximately 77,000 ft^2. Activity areas present in this facility include a museum, research areas, laboratory areas, storage areas, loading bays, and several mechanical and utility rooms. The archeology section is located in the south side of the basement in the Burke Museum.

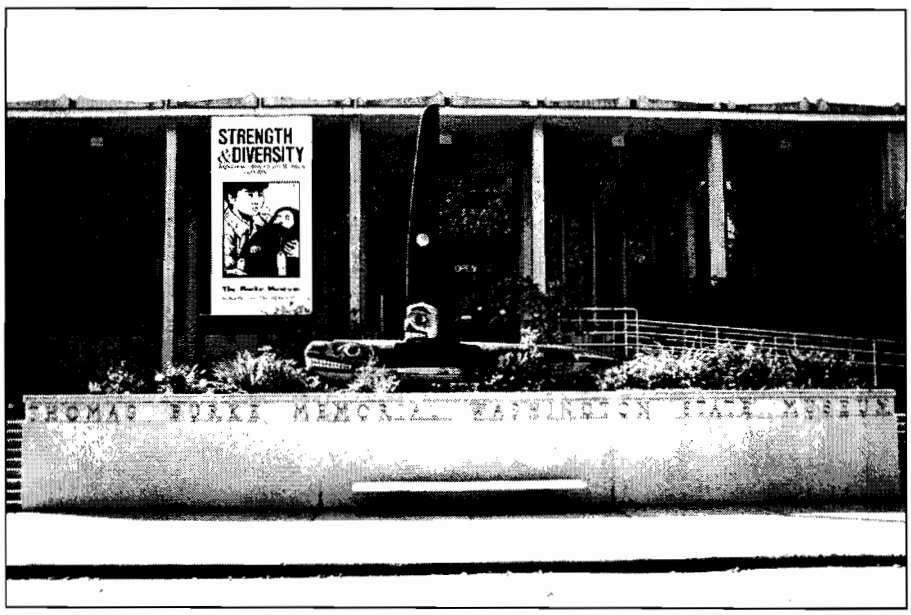

Figure 118. Exterior view of the front of the Burke Museum at the University of Washington.

The facilities within this section include a hallway that also serves as storage space, a laboratory/office, a conservation laboratory/collections storage room, and two collections storage rooms (one containing only artifact collections and the other housing accession records), a small collection of publications, and artifacts. Collections are also housed in an off-site storage facility. Federal collections are stored in three of these areas, in the hallway and in two collections storage rooms at the museum. These have been designated as Collections Storage Area 1, the collections storage room containing only artifacts; Collections Storage Area 2, the combination accession records, publications, and artifacts storage; and Collections Storage Area 3, the hallway containing overflow-storage space.

Structural Adequacy

The museum has a poured-concrete foundation. Exterior walls are concrete cinder blocks with brick facings. The roof was replaced in 1984 and is described as a built-up, "floating" roof composed of asphalt tiles. The building is considered structurally solid; no signs of cracks in the foundation or leaks through the roof were observed during the site visit. A recent campus assessment found the museum to be one of the most earthquake-safe buildings on campus. The basement, where the archeology section is located, was remodeled in 1991 to create more lab and storage space. All of the interior walls in the structure are either concrete cinder blocks or poured concrete. The archeology-section basement floor is noncovered, poured concrete. Support facilities present in the Burke Museum include heating, rest rooms, telephones, computers, and running water for processing artifacts. All of the utility systems are original to the structure. Some of the lighting and electrical panels in the gallery areas have been renovated.

Environmental Controls

Environmental control is by means of a recycled-water heating system. No air-conditioning or humidity-regulation controls are present. Temperature is controlled by thermostats in each room. The temperature range is 68–70°F, which is regularly monitored by physical-plant personnel. Humidity levels are monitored in Collections Storage Area 2, where the accession files are kept. Humidity readings are not recorded, but humidity levels are generally stable in the basement at 50-percent relative humidity.

Air is filtered through a large intake system. Collections storage areas where sensitive collections are located have additional oil filters located in the air vents. The facility manager, Judith

Sterling, monitors the cleaning and maintenance of the Burke Museum. Custodial Services, a contracted, bonded company, cleans the museum daily using two designated employees. No substitutes are allowed.

Light is provided by nonfiltered, fluorescent tubes in suspended light fixtures. In Collections Storage Area 2, large incandescent bulbs are mounted on top of the suspended light fixtures. Only two bulbs are functional, and there are no plans to replace the others.

Pest Management

The anthropology section is developing a pest-management policy, which will be included in the collections-management policy. Spiders have been observed by the staff, and a cafeteria is located directly above the archeology section. Collections are regularly inspected by the collections managers and the facility manager.

Security

Security measures for the Burke Museum include intrusion alarms located on all exterior doors and some interior doors, including the two artifact collections storage rooms. The steel-framed windows measure 3 x 12 feet (w x h) and encircle all above-basement stories of the structure. Ground-level windows are wired with an intrusion alarm. Museum policies include keeping windows closed and locked at all times. Alarms are wired to campus security and a contracted security company. Access at museum entrances is controlled by a receptionist. Visitors must sign in at the reception desk and wear a badge. A staff escort is required in nonpublic areas.

Archeology collections areas have additional controls for access. Only the archeology staff, two janitors, and the facilities manager have keys to the rooms. Cabinets housing collections are kept locked, and only the archeology staff have keys. An archeology staff member must be constantly present with visitors while they are in collections storage rooms. Work space outside the collections storage areas is provided to visiting researchers.

Only one recent incident of unauthorized access has occurred. A person was found by the facilities manager, during business hours, walking in the hallways checking locked doors.

Fire Detection and Suppression

A wet-pipe, zoned sprinkler system was installed in the entire facility. Manual fire alarms are located throughout the building. Two were noted in the basement hallway. Alarms are wired to the fire department, a contracted security company, and the university. A fire extinguisher is located in Collections Storage Area 2. One extinguisher is in the archeology lab. Both were inspected in February 1994.

Artifact Storage

Approximately 15 ft^3 of archeological materials recovered from NAS Whidbey Island are stored in Collections Storage Areas 1 and 3. Refer to Table 23 for a summary of material classes present. Artifacts in the collections storage rooms are generally organized in descending order by state, county, site, and collection. Artifacts from the Coale and Bryan collections are stored in Delta Design cabinets in Collections Storage Area 1. The Stein Collection is stored on a shelving unit

Table 23. Summary of Material Classes Present in the NAS Whidbey Island Collections at the Burke Museum, by Percentage

Material Class	%
Lithics	2
Faunal remains	2
Shell	1
Soil	93
Other[a]	2
Total	100

Note: Percentages based on total ft^3 of materials in the collection.
[a] "Other" includes a shell type collection and worked faunal bone.

Figure 119. State-of-the-art Delta Design cabinets store collections generated from Naval shore facilities.

and in a cabinet located in the hallway, Collections Storage Area 3.

Storage Units

Storage units for the Coale Collection and the Bryan artifact are recently acquired, state-of-the-art Delta Design cabinets within Collections Storage Area 1. These units have adjustable drawers and locking doors. They are well sealed, contain carbon filters, do not outgas, slide on gaskets, and are easily adjustable for maximizing efficient use of space. Cabinet labels are typed, acid-free paper cards inserted into built-in, metal label frames that are covered by clear plastic. The Stein collection, in Collections Storage Area 3, is located in a metal cabinet with lockable doors and a open, metal shelving unit.

Primary Containers

Primary containers for artifacts stored in the Delta Design cabinets are sliding, metal drawers (Figure 119). Each is lined with protective, polyethylene foam and labeled with an adhesive drawer number. Primary containers for artifacts stored in the hallway are standard-size, acid-free boxes with a folded construction and telescoping lids.

Secondary Containers

Secondary containers for the Coale collection are acidic-paper bags, half of which are torn (Figure 120). Labels are written directly on the bags in pen, pencil, and marker. Label information includes site number, description, collector, and date of collection. The Wolfe artifact, included in the Coale collections, has a recent accession number. The secondary container for the Bryan artifact is a 4-mil, zip-lock, polyethylene bag with a preprinted, adhesive label bearing site and catalog numbers. The majority of Dr. Stein's collection, sediment samples, is stored in 4-mil, zip-lock, polyethylene bags with adhesive labels marked with indelible ink. The remainder is stored in a 1- or 2-mil zip-lock bag and small acidic boxes. In sum, secondary containers for the collections include 4-mil zip-lock, plastic bags (94%), paper bags (3%), acidic-cardboard boxes (2%), and one 1- or 2-mil, plastic, zip-lock bag (1%).

Laboratory Processing and Labeling

Collections have not been uniformly processed and labeled. The Coale collection has not been cleaned or labeled, except for the artifact Coale acquired from W. J. Wolfe. Only some of the

Figure 120. Coale Collection artifacts are housed in acidic-paper bags at the Burke Museum.

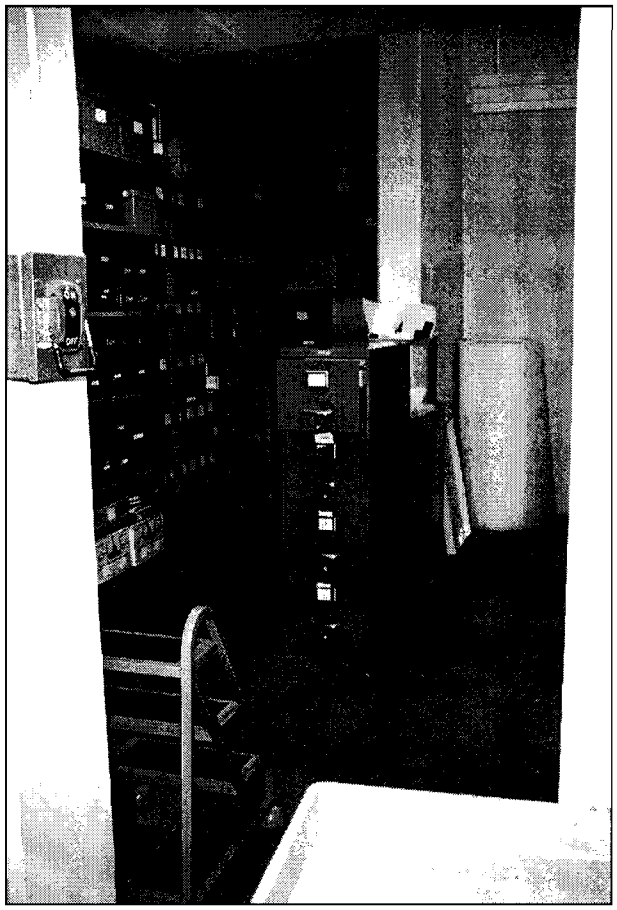

Figure 121. Accession records are housed in Collections Storage Area 2 of the Burke Museum.

larger materials collected by Dr. Stein has been labeled. All washable materials within the Stein collection have been cleaned. The single artifact from the Bryan collection has been cleaned and labeled with indelible ink.

Human Skeletal Remains

No human skeletal remains from Naval facilities are stored at the Burke Museum.

Records Storage

Records are stored in two different locations. Copies of accession records are kept in a metal filing cabinet in Collection Storage Area 2 (Figure 121). Records collected and produced by Dr. Stein from her work at NAS Whidbey Island are stored with archeological materials in standard-size, acid-free boxes in Collections Storage Area 3. Preprinted, adhesive, foil-backed labels contain the museum name, accession number, and site name.

Paper Records

Paper records include accession file contents and background material from Dr. Stein's collection. No archival copies have been produced. Accession records are stored in acid-free folders. Stein's paper records include field notes, records of analyses, stratigraphy drawings, correspondence, raw data, and various background materials. Contaminants are present.

Photographic Records

Photographic records are included in Dr. Stein's records from NAS Whidbey Island. In the collection of a few rolls of color prints, half are stored in the original, acidic envelopes, and half are stored in neutral paper. A small collection of black-and-white enlarged prints of artifacts have not been archivally processed. None was labeled.

Maps and Oversized Documents

The only map is a small copy of a Metzger map; sites where Dr. Stein's collection originated have been plotted on it.

Reports

No reports associated with the collections stored at the museum were present.

Collections-Management Standards

Registration Procedures

Accession Files

All collections acquired since 1991 have been accessioned. Not all collections acquired prior to 1991 have been systematically accessioned.

Location Identification

The physical location of the collections is identified in the accession records.

Cross-Indexed Files

Files are cross-indexed in a computer system by accession number, site number, and constituent.

Published Guide to Collections

No complete guide to the collections has been published.

Site-Record Administration

The Smithsonian Trinomial site-numbering system is used where applicable.

Computerized Database Management

Collections are managed using the ARGUS database program.

Written Policies and Procedures

Minimum Standards for Acceptance

Archeological materials must be regional; archeological materials from the Pacific Rim are the focus of the museum's collections. Acceptance of archeological collections is at the discretion of the curator.

Curation Policy

No written curation policy has been produced.

Records-Management Policy

No written records-management policies have been produced.

Field-Curation Procedures

No written field-curation guidelines have been produced.

Loan Policy

Outgoing loans must be approved by the division head. When accepting loans, the materials must be approved by the museum director and the executive committee.

Deaccessioning Policy

Deaccessions must be approved by the division curator, the museum director, and the museum's executive committee.

Inventory Policy

The museum does not have a written inventory policy.

Latest Collection Inventory

A comprehensive collections inventory has never been completed. However, a collections summary, required by NAGPRA, has been completed.

Curation Personnel

Dr. Stein is a professor of anthropology at the university and curator of archaeology for the Burke Museum. Archeology collections managers include Laura Phillips and Mary Parr.

Curation Financing

Curation activities are not adequately funded at this institution. Current funds are obtained from

a small, budgeted museum fund, grants, and a small endowment fund.

Access to Collections

Access to a collection must be approved by the section curator. Supervision by staff is required.

Future Plans

Staff are currently revising a disaster preparedness plan and collections-management policy, creating an integrated and consistent pest-management program, reducing the backlog of non-accessioned artifacts, and initiating changes recommended by a consultant hired in 1992.

Comments

1. Federal collections are stored in the hallway of the archeology section.

2. Collections that are stored in the hallway are in acid-free boxes.

3. Environmental controls are inadequate to preserve archeological materials and associated documentation.

4. Light sources are nonfiltered.

5. The current pest-management program is inadequate.

6. Storage space is completely full.

7. One collection had not been accessioned.

8. Collections have not been uniformly processed and labeled.

9. No archival copies of the paper records associated with the Navy collections have been produced.

10. Contaminants are present with the original documentation.

11. Photographic records are not labeled or stored in archival materials.

12. All necessary registration procedures are in place.

13. All necessary written policies and procedures are in place, except inventory protocols, records-management policies, and field-curation procedures.

Recommendations

1. Install an HVAC system to control the temperature and humidity; monitor the humidity. Install a dust-filtration system.

2. Place ultraviolet filters on fluorescent lights in collections storage and documentation storage areas.

3. Apply adhesive, polyethylene label holders, with acid-free paper inserts, to acid-free boxes. Labels should no longer be applied directly to the boxes. When label information or box contents change, inserts can be replaced, thus reducing the chance for conflicting and confusing information.

4. Rebag all materials into 4-mil, zip-lock, polyethylene bags. Interior labels made from spunbonded, polyethylene paper (e.g., Nalgene polypaper) should be labeled in indelible ink and inserted into the polyethylene bags.

5. Move collections that are currently being stored in the hallway on metal shelves; place these in a secure, environmentally controlled room. Collections should be divided into additional boxes to alleviate overcrowding, premature failure of containers, and accidents from moving heavy boxes. Limit boxes to 20 pounds.

6. Make duplicates of all associated documentation on acid-free paper and store these in a separate, fireproof, secure location. Remove contaminants from originals.

7. The Coale collections should be cleaned, labeled with indelible ink, and enclosed in archival, polyethylene, zip-lock bags that are labeled

either directly with indelible ink or using archival, adhesive labels.

8. Implement a professional pest-management program that includes monitoring and control.

9. Accession all nonaccessioned federal collections.

10. Process and label artifacts using indelible ink, sealed with an acrylic coat, to prevent information loss if artifacts become separated from provenience data.

11. Photographic records should be stored in a stable environment that has humidity and temperature monitoring and control devices.

12. Place all photographic materials in archival, polypropylene sleeves; place sleeves in acid-free, three-ring binders. Photograph logs should be on acid-free paper in indelible ink.

13. Develop and implement inventory protocols, records-management policies, and field-curation procedures.

14. Provide additional space for collections storage.

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Ventura County Museum of History and Art

Ventura, California

Repository Summary

Volume of Artifact Collections: 1 ft^3

Collection Origin: OLF San Nicolas Island
Compliance Status: Collections will require complete rehabilitation to comply with existing federal guidelines and standards for curation.

Linear Feet of Records: < 1 linear foot

Compliance Status: Associated documentation will require rehabilitation to comply with current federal guidelines and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: Curation activities are not funded.

Date of Visit: December 9, 1993

Points of Contact: Myrle Kirk, volunteer, and Tim Schiffer, curator

The Ventura County Museum is currently storing less than 1 linear foot of associated archeological documentation and approximately 1 ft^3 of archeological materials collected on OLF San Nicolas Island. The collection was accepted in January 1985 from the commander, Pacific Missile Center, through the Natural Resource Management Office. Refer to Table 24 for a summary of material classes represented in this collection. The only associated documentation for this collection is a file and catalog cards for the 73 pieces. The Ventura County Archaeological Society has an agreement with this museum to store their collections in the basement. All staff responsible for the collections in the museum are docents or volunteers of the society.

Table 24. Summary of Material Classes Present in San Nicolas Island Collections at the Ventura County Museum, by Percentage

Material Class	%
Prehistoric	
Lithics	70
Faunal remains	10
Shell	15
Historical-period	
Ceramics	3
Glass	2
Total	100

Note: Percentages based on total ft^3 of materials in the collections.

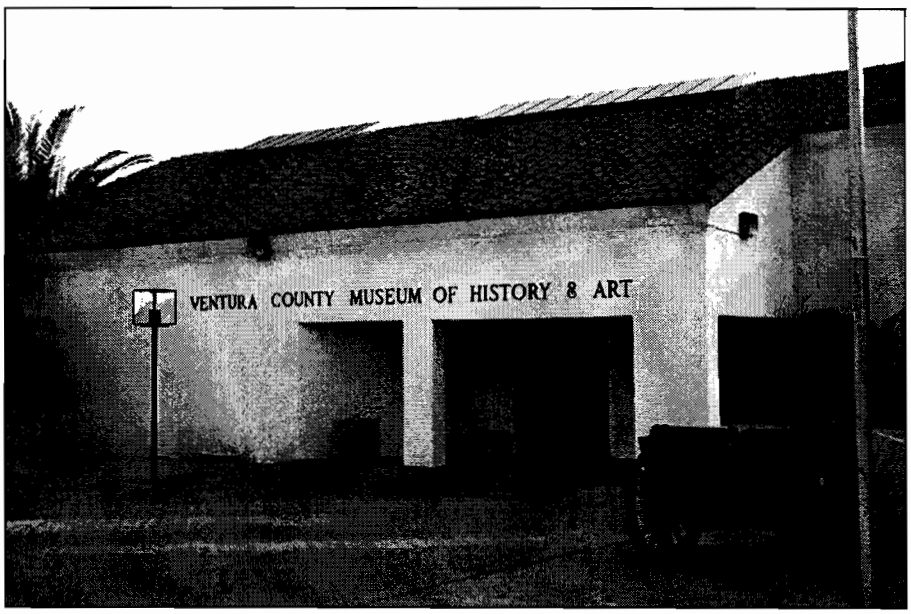

Figure 122. Exterior view of the Ventura County Museum.

The museum recently hired a director of curatorial affairs, Tim Schiffer, who is currently working on obtaining funds for all the museum's collections to be curated from a conservation grant.

Assessment

Structural Adequacy

The museum (Figure 122) was built in 1977 and has never had any structural modifications. It has a poured-concrete foundation, concrete-block walls, and a tile roof. All utilities are original. The museum is approximately 15,700 ft^2, with two floors above ground and one floor below (where the collections storage room is located). There is a room in the corner of the basement with two concrete-block walls, two walls of wire mesh over a wooden frame, and one wood-panel door. This room has a sign on the door that reads "Ventura County Archaeological Society Archival Record and Collection Storage Area." This collections storage room (Figure 123) is approximately 180 ft^2, and more than 90 percent of the area is devoted to records and collections storage. The room is extremely cramped and cluttered.

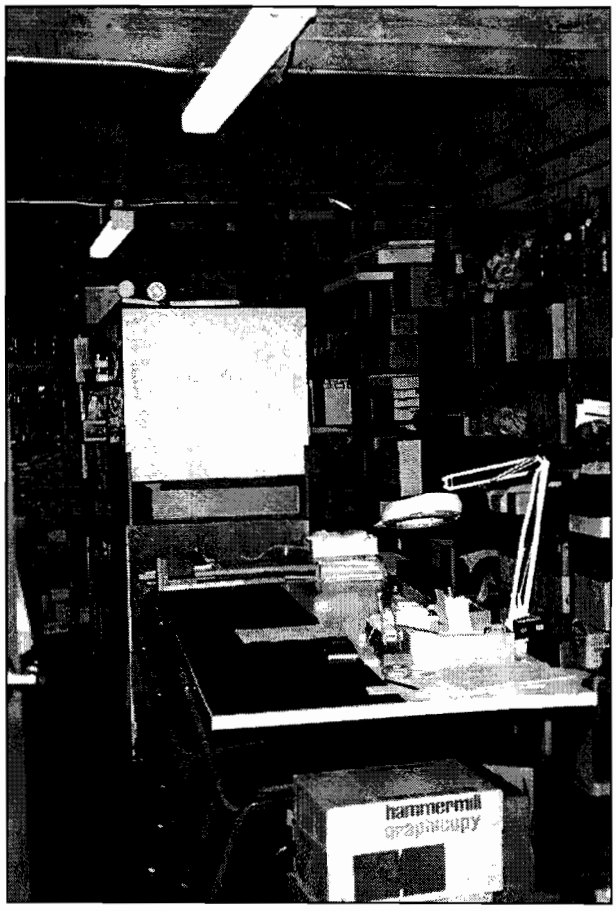

Figure 123. Archeological collections at the Ventura County Museum.

Environmental Controls

The repository and collections storage room both have an electrical steam-heating and central air-conditioning system with dust filters that are changed on an as-needed basis by a contracted maintenance and cleaning service. The targeted temperature level is approximately 70°F. No humidity monitors or controls are present in the collections storage room. The collections storage room is located in the basement, and no windows are present. Light sources are nonfiltered fluorescent tubes.

Pest Management

The assistant curator monitors for pest infestations with pest strips. When needed, a contracted company fumigates the infested areas of the museum. No signs of pest infestation in the repository or collections storage room were noted during the site visit.

Security

Security measures at the museum include intrusion alarms on all exterior doors and windows. The alarm is wired to a contracted security company that notifies the police department and museum staff in the event of an intruder. Motion detectors are used throughout the facility, but none is located in the basement where the archeological collections storage room is. All exterior and interior doors have key locks. The public is not allowed in the basement. The elevators are electronically locked at night to prevent unauthorized entry to the different levels of the museum, including the collections storage room. There is one wood-panel door to the collections storage room in the basement. This door has a key lock, and only the curatorial staff of six have keys.

Fire Detection and Suppression

The museum is a concrete-block building with a tile roof, making it virtually fireproof. There are fire extinguishers in the museum, but none is in the basement where the collections storage room is located. Smoke detectors and heat sensors are installed throughout the museum and basement.

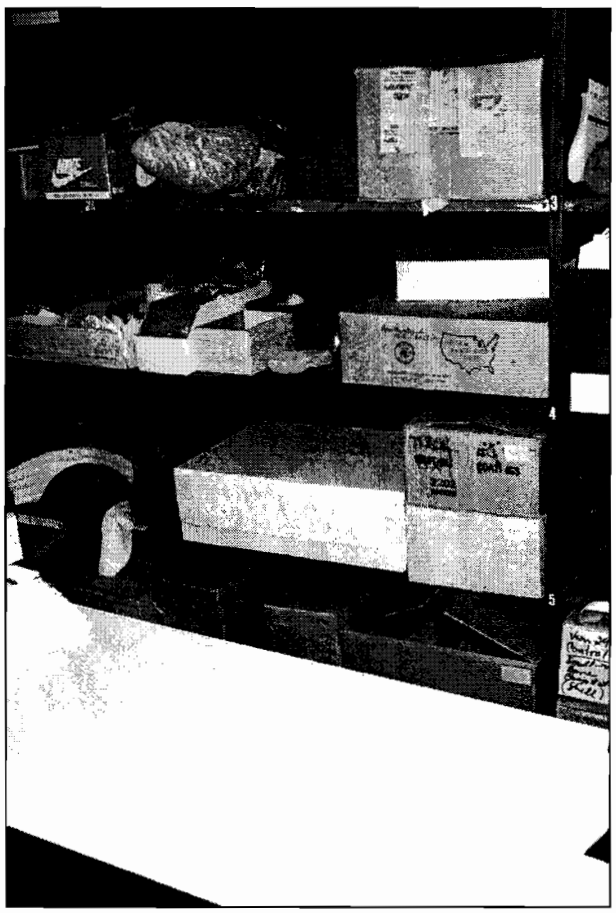

Figure 124. Wooden shelves house the one (white) box at the Ventura County Museum in which San Nicolas Island artifacts are curated.

Both devices trigger the halon sprinkler system that is installed in the entire building. The alarms are wired to a contracted company that, in the event of fire, notifies the local fire department and museum staff.

Artifact Storage

Storage Units

Collections housed at this facility are organized by site number and are stored on wooden shelving units of various sizes (Figure 124). The box of San Nicolas Island artifacts is located on shelf #5 within one of these units, which measure 8 x 1 x 6.25 feet (w x d x h). The shelves of each unit are numbered with adhesive, vinyl numbers.

Primary Containers

The primary container for the 1 cubic foot of San Nicolas Island artifacts is a white, acidic-cardboard box with a telescoping lid (see Figure 124). Additionally, one San Nicolas Island mortar is loose on the shelf next to the box. There are no labels on the primary container.

Secondary Containers

Secondary containers present in the cardboard box consist of acidic, egg-crate containers lined with acidic foam, shoe box lids, and corrugated-cardboard trays. The mortar on the shelf next to the box had no secondary container.

Laboratory Processing and Labeling

All San Nicolas Island artifacts are cleaned, labeled with india ink, and sealed with an acrylic coating. The loose mortar has a white-paint label that is sealed with an acrylic coating.

Records Storage

Paper Records

Associated documentation from the San Nicolas Island collection consists of one acidic-paper file folder with the accession record produced by the museum. This is kept in a standard-size, five drawer, metal filing cabinet in the collections storage room. The only other records associated with this collection are the 73 artifact catalog cards that are kept in an open, acidic-cardboard box on the archivist's desk.

Photographic Records

There were no photographic records associated with the San Nicolas Island collection.

Maps and Oversized Documents

There were no maps or oversized documents associated with the San Nicolas Island collection.

Project Reports

There were no reports associated with the San Nicolas Island collection.

Collections-Management Standards

Registration Procedures

Accession Files

All materials are accessioned upon receipt.

Location Identification

The physical location of the collection within the collections storage room is identified in the accession file.

Cross-Indexed Files

Site numbers are cross-indexed by region within the accession file and the artifact catalog cards.

Published Guide to Collections

This facility has not published a guide to their collections. However, there is a master catalog for collections.

Site-Record Administration

A trinomial site-numbering system is used.

Computerized Database Management

This facility does not use computers to manage their collections information.

Written Policies and Procedures

Minimum Standards for Acceptance

No minimum standards for acceptance have been established. However, the museum is currently trying to institute a policy that will address this issue.

Curation Policy

No written, comprehensive curation policy for archeological materials and associated documentation is in place.

Records-Management Policy

No written records-management policy is established. Records are kept by, and managed at the discretion of, the volunteer archivist and registrar. Records are not allowed to leave the collections storage room.

Field-Curation Procedures

No field-curation guidelines have been established.

Loan Policy

Neither the museum nor the Ventura County Archaeological Society loans any of their materials.

Deaccessioning Policy

No deaccessioning policy is in place.

Inventory Policy

There currently is no written inventory policy. The initial inventory is kept if provided upon receipt of a collection.

Latest Collection Inventory

All archeological collections were last inventoried in February and March 1993.

Curation Personnel

There is one paid position and five volunteers. Tim Schiffer is the full-time curator for the museum. Myrle Kirk is the volunteer curator of archeology for the Ventura County Archaeological Society, which stores its collections at the museum.

Curation Financing

There is no current funding for curation activities. The staff is attempting to implement a new policy that will charge a long-term curation fee, by numbers of boxes, upon acceptance of collections.

Access to Collections

Only the museum staff of six and the volunteer from the Ventura County Archaeological Society have access to the basement collections storage area. The door from the stairs to the basement is kept locked and only these people have keys. Researchers are allowed access to the collections and records only under the supervision of the curator, collections manager, or the volunteer archivist who manages the archeological collections.

Future Plans

Ventura County is currently creating new policies for the curation of collections. The Ventura County Archaeological Society has an agreement with Ventura County to keep their archeological collections in the basement of the museum. This is the area partitioned off in the basement and managed by a society volunteer. The museum curator is applying for a $25,000 conservation grant. Details are still being worked out as to whether any of this money will be used for the conservation of the archeological materials in the basement. The museum may attempt to accession the materials from the society.

Comments

1. The artifact collections are well organized and easily accessed.

2. Associated documentation has been partially duplicated and stored in a separate container, but that container is in the same collections storage room.

3. The collections storage room does not have a fire extinguisher.

4. The collections are kept loose on wooden shelves or in acidic containers.

5. The museum has inadequate environmental controls.

Recommendations

1. Federal archeological collections must be rehabilitated to comply with federal guidelines and regulations. This includes replacing primary containers with acid-free boxes, secondary containers with 4-mil, zip-lock bags, and labeling artifacts with indelible ink.

2. Duplicates of all associated documentation must be on acid-free paper and stored in a separate, fireproof, secure location.

3. Implement reliable and consistent management controls for current and incoming collections.

4. Provide funding for all necessary curatorial responsibilities and activities.

5. Install necessary environmental controls.

6. Place more fire extinguishers within the collections storage area.

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Museum of Anthropology

Washington State University, Pullman

Repository Summary

Volume of Artifact Collections: 117 ft^3

Collection Origin: WPNSUPFACSBDET Port Hadlock (Indian Island)

Compliance Status: The artifact collection, which includes human skeletal remains, was recovered from WPNSUPFACSBDET Port Hadlock and is currently being rehabilitated at WSU.

Linear Feet of Records: 4.2 linear feet

Compliance Status: Collection is currently being rehabilitated at WSU.

Human Skeletal Remains: According to a 1995 report by William Andrefsky, Jr., Paul H. Sanders, Jill M. Wagner, and Lynn E. Mayer, entitled "Archaeological Collections Management Plan for Resources from Facilities of Naval Undersea Warfare Center Division and Naval Weapons Station, Seal Beach Detachment, Port Hadlock (Formerly Indian Island Detachment), Keyport, Washington" (*Contributions in Cultural Resource Management* No. 39, Center for Northwest Anthropology, Department of Anthropology, Washington State University, Pullman), over 100 human bones and bone fragments from the former Indian Island Detachment at Port Hadlock are being curated at the Museum of Anthropology, WSU. The volume of human skeletal remains and minimum number of individuals is unknown to the St. Louis District.

Status of Curation Funding: Curation activities are not funded.

Assessment

Approximately 117 ft^3 of artifact collections and human skeletal remains recovered from WPNSUPFACSBDET Port Hadlock, are currently located in two separate repositories at the Museum of Anthropology. According to Andrefsky et al. (1995), "Most of the ethnological and archaeological materials considered to be 'exhibitable' are held at the Department of Anthropology (College Hall) in physically secure and environmentally stable settings." Bulk materials recovered from large-scale excavations are housed in the partially heated, metal Butler building. The Museum of Anthropology performed a self-evaluation to assess their curation status, and they published their results in Appendix F of the Andrefsky et al. report.

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Joseph Waterhouse, Sr., Residence

Olympia, Washington

Repository Summary

Volume of Artifact Collections: < 1 ft^3

Collection Origin: WPNSUPFACSBDET Port Hadlock (Indian Island)

Compliance Status: The collection needs rehabilitation and integration into the Indian Island Collection at the Center for Northwest Anthropology, WSU, Pullman.

Linear Feet of Records: None

Compliance Status: Compliance for associated documentation was not assessed.

Human Skeletal Remains: None

Status of Curation Funding: Curation has been financed by Waterhouse's private funds.

Date of Visit: June 1, 1994

Point of Contact: Joseph Waterhouse, Sr.

Results of an inventory conducted by the Center for Northwest Anthropology, WSU, Pullman, under contract to the Navy (see Chapter 51 and below) documented the location of a missing portion of a collection excavated by Dr. Astrida Blukis Onat in the early 1980s. The artifacts were collected from site 45JE16 on Indian Island, Washington (WPNSUPFACSBDET Port Hadlock). Records indicated that a portion of this collection had been identified as being on loan to an individual named Joe Waterhouse. Administrative records obtained from Patricia Duff at EFA West indicated that some research had been undertaken to locate the loaned materials. New information about the location of the collection or person cited as having the materials could not be obtained. By contacting a local archeologist, Dr. Gary C. Wesson, the St. Louis District assessment team was able to speak with Joe Waterhouse, Jr., in Alaska. Mr. Waterhouse knew of the collection and acknowledged its presence at his father's home in Olympia, Washington. He provided the assessment team with his father's phone number. Mr. Waterhouse, Sr., has exhibited these collections in his home and has used the artifacts as teaching tools during special lectures for school children. He has also shown the artifacts to contractors threatening to develop land where archeological sites are located in order to dissuade them from destroying the sites.

Assessment

Structural Adequacy

The repository is a private two-story home set in a residential area developed in the late 1970s or

Figure 125. Artifacts at the private residence of Joseph Waterhouse, Sr., are displayed in an exhibit case in the dining room.

early 1980s. The foundation is concrete. The exterior walls are wooden siding. The home has a shingled roof original to the structure. Two sides of the roof were replaced eight years ago. The roof and foundation are structurally sound; no evidence of leaks or cracks were observed during the site visit. Replacement of wooden beams has been the only renovation.

Environmental Controls

The heating system functions by means of electrical resistance. No dust filters are utilized. Nonfiltered natural light comes from windows in the two exterior walls. There is no cooling system or humidity monitoring and controlling system.

Pest Management

Pest management includes the use of sprays periodically. No monitoring is done.

Security

Windows and doors are locked for security.

Fire Detection and Suppression

The fire-detection system consists of a smoke detector. The fire-suppression system consists of a fire extinguisher.

Artifact Storage

The artifacts are exhibited in a display case in a dining-room corner.

Storage Units

The storage unit is an enclosed display case (Figure 125), made of Plexiglas, that has a metal frame. It is secured with a key lock.

Primary Containers

All artifacts are exhibited in the display case. Therefore, there are no primary containers (see Figure 125).

Secondary Containers

All artifacts are exhibited in the display case. Therefore, there are no secondary containers.

Table 25.
Inventory of Artifacts on Loan to Joseph Waterhouse, Sr.

Catalog Number	Description	Catalog Number	Description
8	barbed point	297	stone blade
13	bone harpoon	311	harpoon point
22	antler wedge	341	bone point
53	mat creaser	361	harpoon fragment
54	fishing barb	395	harpoon valve
55	bone point	396	harpoon valve
95	fish teeth	404	stone maul fragment
104	cut bone	440	bird-bone tube
107	cut bone	450	"coupled" bones
112	worked bone	467	scraper
115	wedge fragment?	473	"slt stone plsh"
144	bone comb fragment	483	dentalium shell
154	pendant	488	worked bone
182	blanket pin	494	dentalium shell
196	bone point	531	worked bone
255	net sinker	539	shell ornament
260	bone point	544	barbed harpoon
278	antler wedge	566	antler wedge
283	stone adze	571	worked bone
288	bird-bone point	598	pectin
290	bead	613	barbed harpoon

Note: Catalog numbers and descriptions after Andrefsky, William, Jr., Paul H. Sanders, Jill M. Wagner, and Lynn E. Mayer (1995), Archaeological Collections Management Plan for Resources from Facilities of Naval Undersea Warfare Center Division and Naval Weapons Station, Seal Beach Detachment, Port Hadlock (Formerly Indian Island Detachment), Keyport, Washington. *Contributions in Cultural Resource Management* No. 39. Center for Northwest Anthropology, Department of Anthropology, Washington State University, Pullman. Submitted to EFA West, Naval Engineering Command, San Bruno, California. Department of Defense Legacy Program, Legacy Project No. 39, Contract No. N62474-91-LT-00719.

Laboratory Processing and Labeling

The artifacts (Table 25) have been cleaned and are labeled in india ink on a clear or white background (Figures 126 and 127). Many of the artifacts have tape on them in an attempt to secure them to the material within the display cabinet.

Human Skeletal Remains

No human skeletal remains are included in this collection.

Records Storage

No records were assessed during the site visit.

Collections-Management Standards

Because this is a private residence, no formal collections-management standards are in place.

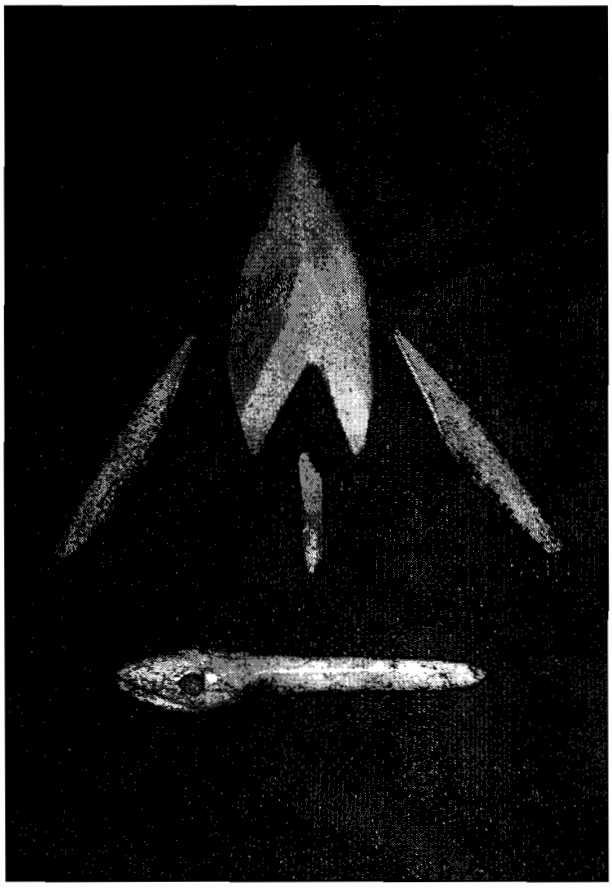

Figure 126. Artifacts including a harpoon, barbs, and a bone point with a carved face are among those located at the Waterhouse, Sr., residence.

Comments

1. Waterhouse has taken adequate care of the collections, to the best of his ability.

2. The existence of this collection has always been known, but its exact location was unknown to Blukis Onat, the Navy, and the curation facility at WSU, Pullman.

3. Waterhouse has used the collections as teaching aids for children and contractors. He believes his use of the collection for educational purposes, especially with local contractors, has aided in the protection of archeological sites that are a part of his Native American heritage.

Recommendations

1. Return the collection to the Center for Northwest Anthropology, WSU, Pullman. Inventory, accession, rehabilitate, and integrate this collection into the WSU collection.

2. Rehabilitate the artifact storage. Archeological materials should be stored in acid-free boxes.

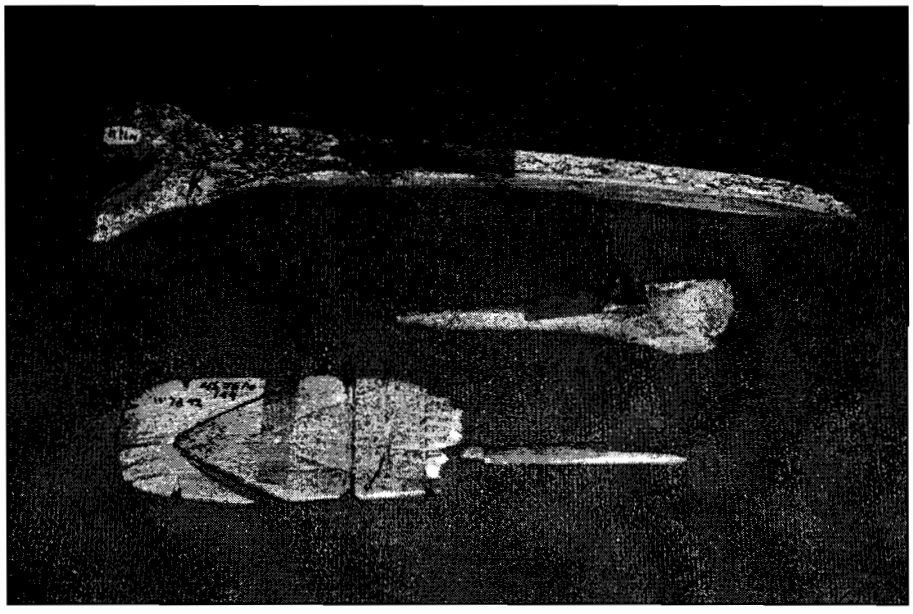

Figure 127. A decorated bone comb and two bone points are among those located at the Waterhouse, Sr., residence.

The secondary containers should be polyethylene, 4-mil, zip-lock bags with labels in indelible ink. Labels on polypaper should be inserted into the closed bags.

3. Initiate formal loan procedures if Waterhouse wishes to retain the artifacts. Responsible parties include the Navy, the Center for Northwest Anthropology, WSU, Pullman, and Waterhouse.

4. Assess the collection according to NAGPRA stipulations.

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Findings Summary

Of the 28 Naval Shore Activities located in California, Oregon, Nevada, and Washington that were assessed in this report, artifact collections have been identified and assessed for 10 separate Naval activities and installations (Table 26), in three of the four states. Twenty-nine separate repositories (encompassing a total of 39 storage locations) in three states are known to curate archeological collections, associated documentation, or both for these activities. Each of these facilities and their satellite repositories was visited and assessed by the St. Louis District team. Overall, 36 artifact collections and 354 reports were located.

The vast majority of the artifact collections (799.2 ft^3; 79%) is associated with NAWS Point Mugu, which includes San Nicolas and San Miguel Islands. The remaining 210.5 ft^3 (21%) of artifact collections are associated with other installations.

Physical inspections of the artifact and documentation collections were limited to those collections located in the four-state study area. However, it is known that collections from San

Table 26.
Location and Volume of Identified EFA West and EFA Northwest Artifact Collections

Naval Facility	On-Base Repository	Off-Base Repository	Total
NFD Point Molate	—	2.9	2.9
Mare Island Naval Shipyard	—	1.0	1.0
NAS Moffett Field	—	4.0	4.0
NAWS Point Mugu	212.0	587.2	799.2
MWTC Bridgeport	—	0.5	0.5
NAS Fallon	—	~5.1	~5.1
NAS Whidbey Island	—	77.0	77.0
WPNSUPFACSBDET Port Hadlock	—	119.0[a]	119.0
SUBASE Bangor	1.0	—	1.0
Total	213.0	796.7	1,009.7

Note: Volume measured in ft^3.
[a] Of the 119 ft^3, 117 ft^3 are curated at WSU, Pullman; these materials were not assessed by the St. Louis District.

Nicolas and San Miguel Islands, as documented by Blackburn and Hudson in 1990 in *Time's Flotsam: Overseas Collections of California Indian Material Culture,* have been identified in museums in Brussels, Belgium; Copenhagen, Denmark; Lyon, France; Paris, France; Berlin, Germany; Cambridge, England; London, England; Oxford, England; Rome, Italy; Leiden, the Netherlands; Christchurch, New Zealand; Dunedin, New Zealand; Gotborg, Sweden; and Stockholm, Sweden. The Smithsonian Institution, the American Museum of Natural History, and the Peabody Museum, Harvard University, also are known to have collections. Determining the dates of acquisition for each of these collections is beyond the scope of this project, but should be investigated. The St. Louis District recommends further investigation of the Navy's legal responsibilities for collections that have been removed from Navy installations and transferred to foreign countries. Tables 27 and 28 provide a detailed summary of collection origins, current locations, volume of artifact collections, volume of human remains, and linear feet of documentation. Table 27 focuses on NAWS Point Mugu collections, and Table 28 lists the remaining collections by facility.

Infrastructure Controls

Navy collections are housed in many different types of buildings. Table 26 shows the volume of artifacts stored at on-base repositories vs. off-base repositories, by installation. Approximately 24 percent of the Navy's artifact collections are currently located at an on-base facility. The remaining 76 percent are located at a range of other repositories. Table 29 lists the different types of repositories housing the Navy's collections.

Only one of the two repositories for artifact collections located on a Naval installation is a

Table 27.
Summary of Collections Associated with NAWS Point Mugu

Location	Volume of Artifacts (ft^3)	Documentation (linear feet)	Human Remains (ft^3)
Antelope Valley Indian Museum	7.5	0.5	—
CSULA	201.0	5.3	—
CVMH	1.0	0.5	—
CINP	4.1	1.2	—
Phoebe Hearst Museum	21.0	0.5	?[a](41 MNI)
Lompoc Museum	1.0	0.5	—
NHMLAC	128.5	5.0	7.0
NAWS Point Mugu	—	7.0	—
OLF San Nicolas Island	212.0	9.5	31.0
RMW	—	0.5	—
SDMM	55.0	0.5	53.0
SBMNH	55.5	1.3	14.0
Southwest Museum	25.0	1.6	25.0
UCLA	16.1	0.5	100.0
UCSB	70.5	0.5	3.0
Ventura County Museum	1.0	0.5	—
Total	799.2	35.4	233.0

[a] Collection was unavailable for assessment.

Table 28.
Summary of Collections Associated with Facilities Other than NAWS Point Mugu

Location	Volume of Artifacts (ft^3)	Documentation (Linear Feet)	Human Remains (ft^3)
NFD Point Molate			
Phoebe Hearst Museum	2.9	0.5	?[a]
Mare Island Naval Shipyard			
ARS	1.0	3.3	—
NAS Moffett Field			
Basin Research	1.0	0.5	—
Phoebe Hearst Museum	3.0	0.5	—
NCBC Port Hueneme			
RMW	—	0.5	—
NAVSTA Treasure Island			
Phoebe Hearst Museum	—	0.5	1.0
MWTC Bridgeport			
Basin Research	0.5	0.5	—
NAS Fallon	—	3.0	—
Phoebe Hearst Museum	1.6	0.5	—
NSM	3.0	0.5	2.0
UNR	0.5	2.2	—
NAS Whidbey Island	—	0.5	—
Burke Museum	15.0	0.5	—
SCCC[b]	62.0	2.5	13.0
WPNSUPFACSBDET Port Hadlock	—	1.0	—
Burke Museum	1.0	0.5	—
WSU[c]	117.0	4.2	?
Joseph Waterhouse, Sr., residence	1.0	—	—
SUBASE Bangor	1.0	0.5	—
Total	210.5	22.2	16.0

[a] Collection was unavailable for assessment.
[b] This collection has been moved to BOAS, Inc.
[c] WSU and NAVSTA Treasure Island collections were not assessed by the St. Louis District.

curation facility. Of the 29 repositories assessed, 16 are museums, and 6 are associated with universities or colleges. The Phoebe Hearst Museum at UCB and the Burke Museum at the University of Washington were counted as museums rather than as universities because they are operated as such.

None of the facilities housing the Navy's archeological collections is in full compliance with standards mandated by 36 CFR Part 79 for curating federal archeological collections. Infrastructure controls and the component units of environmental controls vary throughout the repositories examined during the study. Also taken into account in this study are the functions of the current repositories. The repositories in Table 30 are considered to be professional, long-term curation facilities; Table 30 details the presence or absence of infrastructure controls in these repositories. Table 31 shows the presence or absence of infrastructure controls in "temporary" repositories that are not considered to be long-term curation facilities. The summary figures for infrastructure controls presented below combine information from both permanent and nonpermanent repositories.

Environmental Controls

The installation and proper use of an HVAC system where collections are stored is the recommended method for protecting collections from structural damages incurred by temperature and humidity fluctuations.

Most of the repositories do not have adequate environmental monitoring and controls. Seven (18%) have HVAC systems that maintain constant temperature and humidity. However, 14 of the repositories (36%) have controls for both heating and cooling. Sixteen repositories (41%) have partial temperature controls, including either a heating or cooling system, and 2 (5%) have no environmental controls.

Table 29. Number and Types of Repositories Containing Artifacts

Naval Facility	Installation Repository	University/ College Repository	Museum Repository	Contractor/ Miscellaneous Repository
NFD Point Molate	—	—	1	—
Mare Island Naval Shipyard	—	—	—	1[a]
NAS Moffett Field	—	—	1	1[b]
NAWS Point Mugu	1	3	9	1[c]
NAVSTA Treasure Island	—	—	1	—
MWTC Bridgeport	—	—	—	1[b]
NAS Fallon	—	1	2	—
NAS Whidbey Island	—	1	1	—
WPNSUPFACSBDET Port Hadlock[d]	—	1[e]	1	1[f]
SUBASE Bangor	1[g]	—	—	—
Total	2	6	16	5

[a] Collection at ARS, Petaluma, California.
[b] Collection has been transferred to a curation facility.
[c] Collection at CINP Visitors' Center.
[d] Joseph Waterhouse, Sr. keeps a small collection in his home.
[e] Materials at WSU, Pullman, were not assessed by the St. Louis District.
[f] Collection at a private home has been included under a private contractor.
[g] Repository is not an official curation facility.

Table 30.
Infrastructure Controls Present in Evaluated Permanent Curation Facilities

Repository	Maintenance	Environmental Controls			Security			Fire Safety					Pest Management	Full-Time Curator
		Dust Filters	Heating	Air-Conditioning	Alarm	Motion Detector	Guard	Smoke Detector	Heat Sensor	Manual Alarm	Fire Extinguishers	Sprinkler		
Antelope Valley Indian Museum														
Repository 1	x		x	x	x	x		x			x		x	x
Repository 2											x		x	x
Burke Museum	x	x	x		x				x	x	x	x		x
CVMH	x	x	x	x			x	x	x	x	x	x	x	x
CINP														
Repository 1	x	x	x	x	x			x	x	x			x	
Repository 2	x	x	x	x	x			x			x		x	
CSULA	x	x	x	x			x			x	x		x	
NHMLAC														
Collections Storage Area 1	x						x	x	x	x	x	x	x	x
Collections Storage Area 2	x		x	x			x	x		x	x		x	x
Collections Storage Area 3	x	x	x	x			x	x	x	x	x	x	x	x
Collections Storage Area 4	x			x			x	x		x	x		x	x
Lompoc Museum	x	x	x		x			x			x	x	x	x
NSM														
Repository 1	x	x	x	x	x	x			x		x	x	x	x
Repository 2	x		x		x				x	x	x	x	x	x
OLF San Nicolas Island	x		x	x			x		x	x	x	x		
Phoebe Hearst Museum														
Repository 1	x	x	x		x	x	x	x	x		x	x	x	x
Repository 2	x	x	x		x	x	x		x	x	x	x	x	x
Repository 3	x	x	x		x		x		x	x	x	x	x	x
SDMM	x	x	x	x	x		x	x	x		x		x	x
SBMNH														
Repository 1														
Collections Storage Area 1	x	x	x	x	x		x		x		x	x	x	x
Collections Storage Area 2	x	x	x	x	x	x	x		x	x	x	x	x	x
Collections Storage Area 3	x	x	x	x	x		x		x			x	x	x
Repository 2	x	x	x	x	x	x	x	x	x		x		x	x
Southwest Museum	x				x	x		x			x		x	x
UCLA	x	x	x	x	x				x	x	x	x	x	x
UCSB														
Repository 1	x	x	x	x						x	x		x	
Repository 2	x		x						x			x		
UNR														
Repository 1	x	x	x	x		x	x		x		x	x		
Repository 2	x	x	x	x			x		x	x		x		
Ventura County Museum	x	x	x	x	x	x		x	x		x	x	x	

Table 31.
Infrastructure Controls Present in Evaluated Noncuration Facilities

Repository	Maintenance	Environmental Controls			Security			Fire Safety					Pest Management
		Dust Filters	Heating	Air-Conditioning	Alarm	Motion Detector	Guard	Smoke Detector	Heat Sensor	Manual Alarm	Fire Extinguishers	Sprinkler	
Basin Research	x	x	x	x			x				x		x
EFA Northwest [a]	x	x	x	x	x	x			x	x	x	x	
EFA West	x		x				x				x		x
NAS Fallon	x		x				x			x	x		x
NAS Whidbey Island	x		x				x			x	x		
NAVSHIPYD Puget Sound	x		x				x	x	x	x	x	x	x
NAWS Point Mugu	x	x	x	x			x				x		x
WPNSUPFACSBDET Port Hadlock	x		x				x				x		x
NUWC Keyport	x		x				x			x	x		x
RMW Paleo Associates	x	x	x	x							x		
SCCC	x	x	x	x	x	x	x	x	x	x	x	x	x
SUBASE Bangor	x	x	x				x			x	x		x
Waterhouse, Joseph, Sr., residence			x					x			x		

[a] EFA Northwest information is not accurate because the office moved in December 1994.

Building maintenance is conducted on a regular basis at 33 repositories (85%), 4 repositories (12%) are maintained only on an as-needed basis, and 2 (6%) have no maintenance schedule at all.

Pest Management

Exact stipulations for pest management are not outlined in 36 CFR Part 79. However, the St. Louis District, conservators, and AAM guidelines recommend an integrated pest-management system that employs both monitoring and control.

Twenty-nine (74%) of the repositories have an integrated pest-management system. Four repositories (10%) have some type of informal pest-management program, which often includes a physical inspection of collections and control on an as-needed basis. Six repositories (15%) have no pest-management measures in place.

Security

Fifteen (38%) of the repositories examined meet the federal standards for security of archeological collections. This includes both limited and controlled access as well as intrusion detection and deterrence. Additional measures for fragile and valuable items stipulate that they must be locked in a safe, vault, or specimen cabinet.

All of the repositories and collections storage areas have some type of access limitations and deterrent measures. However, half of the repositories do not have working intrusion-alarm systems. Intrusion deterrents include solid wood or metal doors with dead-bolt locks, windowless rooms or locked windows above the first story, and secured access such as facility, building, or campus security. The documented lack of professional security puts many of the Navy's collections at risk.

Fire Detection and Suppression

Both detection and suppression systems for fire emergencies must be present and operational for the repositories to comply with 36 CFR Part 79 fire-safety standards. Thirty-two repositories (82%) contain fire-detection devices. Sprinkler systems are present in one-half of the repositories. Seven (18%) of the repositories still employ dangerous halon-gas systems for fire suppression. This is a direct hazard, and either the halon systems or the collections should be removed from these repositories. If the halon systems are removed, more suitable fire-suppression systems should be installed.

Artifact Curation

The percentages of major prehistoric and historical-period material classes observed in each of the collections are shown in Table 32. Lithics were the most abundant materials in the prehistoric collections. The historical-period component of the collections was smaller, and glass was the most abundant material.

The lithics category includes lithic artifacts as well as other objects of stone. The faunal

Table 32.
Summary of Material Classes Present in Navy Collections, by Percentage

Material Class	%
Prehistoric	
Lithics	32
Human remains	20
Faunal remains	17
Shell	18
Botanical	0.2
Soil	1
^{14}C	3
Textiles	0.2
Mixed	0.2
Other	3
Historical-period	
Ceramics	1
Glass	3
Metal	1
Mixed	0.2
Other	0.2
Total	100

Note: Percentages based on total ft^3 of materials in the collection.

remains and shell categories also include modified artifacts. Soil does not include samples made almost entirely of shell. From a preservation standpoint, material composition is most important.

None of the repositories has completely prepared collections for proper long-term curation. Most of the primary containers are acidic-cardboard boxes with inadequate and inconsistent label information. Often, materials were stored loose in the primary container. Secondary containers in the sampled collections include plastic, zip-lock bags (40%), small cardboard boxes (7%), paper bags (4%), and other (30%). Other includes nonarchival newspaper, bubblewrap, plastic vials, and plastic boxes. Proper secondary containers must replace all improper or nonexistent containers during rehabilitation. Recommended secondary containers are 4-mil polyethylene zip-lock bags. Other types of secondary containers can be used, but they are dependent on the type of material classes. This is a basic recommendation.

Human Skeletal Remains

Human skeletal remains comprise 20 percent of the entire collection (Table 33). The MNI is estimated at 328. The largest collection is from OLF San Nicolas Island, which has an estimated minimum number of 289 individuals, comprising at least 221.5 ft^3. Human remains are often isolated from the rest of the collections, either by being stored in separate primary containers or even, on occasion, being curated in a different location altogether.

Primary and secondary containers used in storing the remains were generally consistent with those used in artifact collections, but more packaging material often was used for additional cushioning.

Records Management

Records associated with archeological collections comprise approximately 57.6 linear feet (see Tables 27 and 28) and consist of photographic records, cartographic records, reports and report drafts, fieldnotes, records of analyses, and machine-readable materials. Only two of the repositories employ archival-quality protocols for maintaining their records collections. Only three repositories have duplicated original records. Two facilities housing records had proper environmental controls. The records at the remaining facilities are subject to deleterious temperature and humidity fluctuations.

Table 33. Summary of Collections Containing Human Remains

Naval Facility	Cubic Feet of Remains	Minimum Number of Individuals	Number of Repositories
NAS Fallon	2	3	1
NAWS Point Mugu			
OLF San Nicolas Island	221.5[a]	289	7
San Miguel Island	11.5[a]	20	5
WPNSUPFACSBDET Port Hadlock	?	3[b]	1
NAS Whidbey Island	1	12	1[c]
NAVSTA Treasure Island	1	1	1
Total	249+	328	11[d]

[a] Does not include the Phoebe Hearst Museum material.
[b] Human remains were not assessed by the MCX. Information was based on a draft report by WSU, Pullman.
[c] Repository count includes only SCCC. The coroner's office was not included.
[d] Human remains from some installations are curated at more than one repository. Therefore, the same repository can be counted more than once.

Collections-Management Standards

Designated curation facilities have been discussed regarding their collections-management standards. Only the statistics for the facilities where curation is included in their mission statement, or who generally view their agency as being an actual curation facility, rather than one by default, have been included.

Few repositories housing artifact and documentation collections associated with EFA West and EFA Northwest installations approach the standards of 36 CFR Part 79.

Basic collections-management tools (e.g., accession records, inventories, and written policies and procedures for curation, records management, and loans) exist at 10 facilities and are partially present at another 10. Most repositories do not have a long-term plan for the management of their archeological resources.

These findings show that many of the examined repositories entrusted with the care of the nation's heritage have no long-term plan for the management of these resources. This responsibility must be honored by federal resource managers as well and should be corrected immediately. Failure to meet elementary curation needs and responsibilities has led to less-than-adequate care for many of the collections for which EFA West is responsible.

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Recommendations

The following general recommendations are submitted for bringing the evaluated collections of EFA West and EFA Northwest facilities into compliance with the mandates of 36 CFR Part 79 and NAGPRA. To ensure maximum savings in cost to the Navy, compliance with 36 CFR Part 79 and NAGPRA should be undertaken together. A comprehensive plan for compliance includes the following points.

Develop a Plan of Action

A comprehensive plan of action for compliance with 36 CFR Part 79 standards minimally must address four points—(1) inventory and rehabilitation of the artifact collections, (2) rehabilitation of the associated records, (3) proper long-term storage of the collections and records, and (4) proper management of collections. Compliance with NAGPRA has been addressed in the final section.

Inventory and Rehabilitate Existing Artifact Collections

A priority based on physical condition must be assigned to EFA West and EFA Northwest collections, a general inventory must be produced, and the collections must be rehabilitated to professional museum standards. Rehabilitation must include the following four steps.

1. Inventory and catalog all collections in a manner consistent with professional museum standards.

2. Label and package artifacts consistently and in accordance with archival standards, and place them in archivally stable containers or storage units.

3. Implement a long-term conservation plan for the collection through consultation of a conservator to assess the condition of perishable materials and establish priorities for conservation.

4. Develop a written manual outlining the policies and procedures for management of the collection.

The cost of the rehabilitation of artifact collections is estimated at $310,000. Rehabilitating the human remains will cost an estimated $67,000. Proper long-term storage will cost an additional $445,000 for artifacts and $96,000 for human remains. Finally, documentation rehabilitation will cost approximately $23,000. Total rehabilitation costs are estimated to be $941,000.

These steps will help stabilize and preserve these collections, while providing the most cost-efficient management for the taxpayer. Proper management of the collections not only provides physical protection and administrative control but also allows students, scholars, and the general public to enjoy the benefits of greater access to these invaluable collections.

Develop a Formal Archives-Management Program

1. Develop an archives inventory-management program that uses microcomputer technology.

2. Inventory and catalog all associated records using professional museum standards.

3. Employ a conservator to assess the condition of paper and photographic records, and establish priorities and recommend strategies for conservation. Implement a long-term conservation program for these records.

4. Transfer general records into acid-free folders and place in appropriate archival storage units.

5. Place photographs, negatives, and slides into archival polyethylene sleeves, acid-free envelopes, and other appropriate storage units.

6. Store large-scale maps in flat metal map cases.

7. Duplicate associated records on acid-free paper or microfilm, and store the duplicates in a location apart from the originals.

Bring Together Collections

A plan of action for the long-term care of collections and associated records must be adopted for the EFA West and EFA Northwest facilities. One plan could include designating three to four regional curation partners to care for the Navy's materials. Three areas minimally would encompass southern California (including the San Diego area), south-central California (including the Los Angeles area), and north-central California (including the San Francisco and Sacramento areas). A less cost-efficient option includes keeping collections in their current locations and providing funds to upgrade the facilities to ensure each repository and responsible curator are in compliance with 36 CFR Part 79.

Develop Cooperative Agreements

To defray costs, EFA West and EFA Northwest are encouraged to develop cooperative agreements with other agencies to share costs of building construction and collections rehabilitation. Cooperative agreements provide opportunities for joint ventures among federal agencies with similar curation requirements.

Dedicate Space for Storage of Collections

Following the adoption of a curation strategy, the next step is to develop a plan of action that identifies how the curation facility will function. Space must be dedicated for the curation of archeological collections and associated records. Office, research, and work areas must be separated from this area. Space that is used for both storage and work is not acceptable. Minimal curation standards must include the following five points:

1. To minimize the deterioration rate of curated objects, storage space must have environmental controls that maintain humidity and temperature at constant levels.

2. Storage space should have a minimal number of doors and walls, and preferably no windows, in order to decrease security risks and the chance of condensation forming on walls and windows during seasonal temperature changes. This will also increase energy efficiency.

3. Storage space should have no water or sewage pipes overhead. Only the sprinkler system for fire suppression should be installed above collections.

4. Access should be limited to curatorial staff, therefore meters for gas and electricity, and electric junction boxes, should be outside of the collections storage areas.

5. The space must be large enough to house existing collections adequately and to accommodate future additions to the collections.

Provide Security, Adequate Fire Detection and Suppression, and Facility Maintenance

In order to adequately protect the collections, a curation plan for the collections facility must provide measures to ensure safety from theft, vandalism, fire, and pests. The plan must also provide for regularly scheduled maintenance of support systems, cleaning, and pest management.

Security

To adequately protect the collections, both structural and procedural security measures should be taken. The building should have an appropriate and operational intrusion-detection and -deterrent system. A recommended deterrent system includes limited access, structurally sound walls and doors that are ideally without windows, and the use of locked cabinets within the storage area. Structural items that provide adequate to optimal safety include the use of doors that are either solid wood or metal. Doors should have both dead-bolt and key locks.

Access to collections areas should be restricted to repository personnel. Keys to the storage area should be restricted to curatorial staff. Researchers and visitors should be allowed access only under the supervision of curatorial staff. A study room should be provided outside of the storage area for the use of researchers needing extended access to collections. Fragile and valuable items require additional security through the use of a locked specimen cabinet, safe, or vault. Additionally, an emergency-management plan should be created to address such emergencies as fires, floods, natural disasters, civil unrest, acts of violence, structural failures, and failures of mechanical systems within the physical plant. A plan of action for each circumstance should be prepared.

Additional safety measures must be taken for protection from earthquake damage. Building structures must be kept up to the latest earthquake codes. Ideally, storage units should have locking doors or bars to keep contents from sliding out. Cabinets should be have supporting braces and be bolted to the floor. Drawers should be lined with ethafoam. Fragile objects should be wrapped in ethafoam for extra protection.

Fire Detection and Suppression

Both the collections, facility personnel, and visitors need to be protected in a curation facility. In addition to complying with local fire codes, the repository should space smoke detectors throughout the collections storage area. Fire extinguishers should be inspected annually, clearly marked, and spaced throughout storage areas. The recommended number of extinguishers depends on the size of the storage area and on the size of the collection. A sprinkler system provides the best means of fire suppression. Duplicate records should be stored in a fireproof storage unit within a separate, equally secure, facility.

Facility Maintenance

The facility, including collections storage areas, needs to be regularly maintained through scheduled activities including regular cleaning, pest-management procedures, and maintenance of utilities and support systems. Curatorial staff or a bonded janitorial service should schedule routine sweeping, mopping, and dusting of the storage area.

An integrated pest-management system must be put in place. Collections should be regularly inspected for infestation, and monitoring devices such as sticky traps for rodents and insects must be used. Regular spraying for pest control must be included in the plan. New collections must be isolated in a separate room as a precaution against mold or pest infestation. Infested collections must be properly treated before they are integrated with other collections.

Support systems, such as temperature and humidity controls, must be regularly monitored.

Dust filters should be changed regularly. Gas, electrical, intrusion detection systems, lights, plumbing, fire alarms, smoke detectors, and the sprinkler system should all be regularly maintained and tested. Restrictions on smoking, eating, and drinking in storage areas should be adopted.

Hire a Full-time Manager for Archeological Collections

Hiring a qualified professional to manage collections is an integral part of the proper maintenance, protection, and use of collections. A collections manager should have professional qualifications and prior experience in collections management, preferably with similar collections. Collections managers are responsible for at least the following seven items.

1. Ensuring that adequate written policies and procedures are adopted and precisely followed by staff members.

2. Ensuring that management records are complete, up-to-date, and properly monitored. Collections information should be readily available to researchers.

3. Employing and updating a computerized database for efficient management of the collections.

4. Ensuring the organization of collections, in order that objects may be efficiently located.

5. Ensuring proper labeling of objects according to a standard system.

6. Ensuring that artifacts and records remain physically secure under all circumstances, including storage, exhibit, and study.

7. Performing periodic inventories and inspections of collections and records to ensure their long-term survival.

NAGPRA Compliance

The facilities and collections within the purview of EFA West and EFA Northwest are subject to NAGPRA. Steps to comply with NAGPRA include:

1. Contact an identified tribal representative for notification of upcoming NAGPRA work.

2. Identify the accession numbers, catalog numbers, and physical location of human remains, associated and unassociated funerary objects, objects of cultural patrimony, and sacred objects within collections through records searches and examination of associated documentation.

3. Search storage containers or units to identify the human remains, associated and unassociated funerary objects, objects of cultural patrimony, and sacred objects.

4. Conduct analyses of the human remains, yielding a detailed inventory of remains that lists the elements present, their completeness and condition, and measurements providing basic descriptions of physical characteristics, estimates of age, and evidence of life activities and trauma that might provide evidence for the cultural affiliation of the remains or the context from which they were recovered.

5. Produce summary and inventory reports for each repository.

a. The summary shall include the following:

- information concerning unassociated funerary objects, sacred objects, and objects of cultural patrimony;
- an estimate of the number of objects in the collection;
- a description of the kinds of objects included in the collection with, where readily ascertainable, reference to the means and dates of acquisition and the locations from which the collections came; and
- if available, information relevant to identifying lineal descendants and cultural affiliation.

b. The inventory report shall include:

- information concerning human remains and associated funerary objects;
- an item-by-item list of all human remains and associated funerary objects that are identified as culturally affiliated with one or more present-day Native American tribes;
- a list of all human remains and associated objects for which cultural affiliation with present-day Native American tribes cannot be determined;
- accession and catalog entries of the human remains with which funerary objects were associated;
- if known, information related to the acquisition of each object, including the name of the person and/or organization for whom the object was obtained, the date the object was acquired, the means of acquisition, and dates of the human remains and associated funerary objects; and
- a description of each set of funerary remains and associated funerary objects, including dimensions, materials, and photographic documentation, where appropriate.

The St. Louis District regards all the aforementioned recommendations as minimal tasks that must be undertaken in order to bring the collections recovered from EFA West and EFA Northwest facilities into compliance with federal standards on archeological curation. Recommendations are based on the standards specifically outlined in 36 CFR Part 79 and on interpretations of standards that are nonspecific or unclear. EFA West and EFA Northwest have been entrusted with important archeological collections. Our knowledge of the prehistory of the West and Northwest Coasts of North America will be tremendously enhanced by the proper care and management of these archeological materials, which are under the care of the U.S. Navy.