MANAGING ARCHEOLOGICAL COLLECTIONS 5. CURATION PRIOR TO THE FIELD

Project design

The curation process begins at the start of planning for any archeological field project, long before the resulting collection makes it to the repository. Before fieldwork begins, it is the professional responsibility of the principal investigator, whether for compliance or research, to ensure that proper arrangements have been made for the long-term care and management of the resulting material remains and associated records, including digital data and reports.

In-field conservation of a kiva mural. *From the photograph collection of the Bureau of Land Management, Anasazi Heritage Center, Dolores, Colorado.*

The first step in the process is to address curation needs in the project or research design and/or in the scope of work for an archeological project contract. Key items to be included are:

- identification of a repository to curate the collections;
- appropriate budgeting for short-term handling and long-term care of the collection; and,
- a well considered collecting strategy.

Selecting a repository

ARPA and 36 CFR 79 require the identification of a repository to house collections prior to issuing a permit for fieldwork on federal land, as well as a signed agreement between the agency owners and the repository. Many states have similar requirements for work on state lands. Some agencies (state, tribal, local, or federal) have designated repositories for their collections. No decision on a repository is needed in these cases, but consultation with the repository prior to fieldwork is still essential, especially on repository requirements for submission of a collection. For other projects there may be a choice of appropriate repositories for the collection and, with choice, well-informed decision-making is critical.

There are several issues to consider when selecting a repository that meets the basic standards of 36 CFR 79. The first is the location of the repository. Preferably it should be in the same region and/or state as the site and should curate similar types of collections. This helps ensure that the repository already has the experience, knowledge, and facilities to care for the collection. It also helps to maximize the research potential of new and existing collections by having the material remains and associated records representing the same cultures and time periods in one place.

The second issue is ensuring that it has good collections management and use policies. A good repository should have a formalized mission statement, scope of collections, collecting plan, and long-range goals. It should also have a policy that facilitates access and use of its collections for researchers, educators, culturally-associated groups, and the interested public. It is important to be assured that archeological collections are explicitly covered by these policies.

Another consideration in choosing a repository is its ability to care for and manage the collection. Does the repository's system(s) to accession, catalog, and inventory objects and records meet professional standards? Does the repository have a backlog of collections to process and catalog? If so, when will they process your collection? Is the catalog and inventory information well organized and are the collections easy to find and use? Does the repository develop useful finding aids for the associated records? Ask to see them. Does the repository staff know how to care for digital data and other magnetic-based records? What access restrictions apply to the collections under their care? What is the repository's position on copyright protected materials, sensitive data, and donor restrictions? Does the repository have to make information available via the Freedom of Information Act or state sunshine laws (see Section IX)?

It is also important to know about the repository's physical plant and their efforts to minimize risks to the collections. Do they include an appropriate storage system and controls for temperature, humidity, and light that are appropriate for the classes of material remains that will be collected and records that will be produced? Do they have a formal risk management plan that addresses issues of security, fire protection, pest management, and disaster preparedness?

The last issue to consider is the financial status of the institution. Does it have the necessary financial resources for long-term care of its collections, as well as its institutional sustainability? It is not wise to put a collection in a repository that has an uncertain future without

open discussion with the staff about what would happen to the collection if the repository closed. Does the repository charge a curation fee, and, if so, what services does that fee cover? For example, does it have adequate funds for object conservation or for migrating and reformatting digital data? The budget provided in a project design should cover the costs of both initial preparation of the materials remains and associated records and their long-term management. Budgeting for collections management and access is covered in detail in the next section.


Proper open shelf storage. *Photo courtesy of Alexandria Archaeology, City of Alexandria, Virginia.*

Once all of these issues have been weighed and a repository has been chosen, a curation agreement should be signed by the collection owner and the repository. This agreement should state:

- Expected condition of the collection upon arrival at the repository. This can include specifics on cataloging (e.g., numbering system, labeling procedures), storage and packing requirements, and expected accompanying documentation/data.
- Details as to what, if any, final preparations for long-term curation are to be done at the repository, including conservation and archival processing and description.
- Costs for any final preparations for long-term care.
- Responsibilities of the repository for collections care.
- Details on ownership, accessibility, and any intellectual property rights issues.
- Details on how deaccessioning is handled (who has authority to make decisions; expected disposition of any deaccessioned objects, etc.).


Compactor shelving at Alexandria Archaeology. *Photo courtesy of Alexandria Archaeology, City of Alexandria, Virginia.*

Most repositories have a standardized curation agreement form and a standard set of requirements for receipt of a collection. The principal investigator should be aware of all requirements and take the necessary steps to comply. One thing to remember is that not only can archeologists choose repositories, but repositories can (and should) choose their collections. Many repositories now have detailed scopes of collections that state what types of collections they will and will not accept. It is important that the archeologist, agency/owner, and repository work together for the best possible care of a collection at the earliest point possible in project planning and budgeting.

Budgeting for curation

A well-planned budget is an essential part of a project design. The budget of a field project that will recover material remains should include funds for preparation and long-term care of the objects and their associated records. If there is little likelihood of recovering material remains, the associated records still need to be cared for and managed. Notably, the creation of digital data is 10-16X more expensive to manage over the long term than paper or microform, including microfilm (Puglia 1999).

Different collection owners or responsible agencies may face some different curation costs determined, in part, by the designated repository. A budget line item for the long-term management of a collection may not be necessary for a project by an agency that has its own repository. However, a budget line item for initial processing of the material remains and associated records is almost always necessary, as well as any anticipated conservation costs.

The curation budget for a project generally depends on three factors:

- the amount and classes of materials expected to be recovered and the associated records, including digital data, expected to be created,
- repository requirements for submission of a collection, and
- any fees for long-term care or other services charged by the repository.

Due to the nature of the work, the principal investigator can never know exactly what will be found in the field. Good estimations, however, can be based on what has been recovered at similar sites in the area and on the project's collecting strategy. Therefore, it is very useful to research the nature of similar existing collections in the project design phase. Examination of existing collections may also help to anticipate any unusual conservation needs requiring special budgeting.

As noted in Section IV, repositories across the U.S. charge vastly different amounts for long-term management of collections. These differences exist for a variety of reasons. One is how the repository is principally funded. Many private, non-profit repositories have to seek

funds from outside sources, including grants. Grants are often not available for federal or state collections, which the repository does not own. Many repositories now cover some of their costs by charging curation fees.

The results of an informal survey of repository curation fees by the National Park Service showcases some of the differences in how and why repositories charge for collections care. A total of 94 repositories responded to the survey in 1997, which was updated in 1998. A significant factor in the differences found involves the types of service fees that repositories charge. These include:

- Entry or receiving (to review and process documentation on a collection)
- One-time processing and long-term curation, usually "in perpetuity"
- Processing (cleaning, packaging, and/or cataloging to repository's standards)
- Annual (yearly maintenance)
- Rehabilitation of an existing collection
- Processing associated record and reports (some repositories charge the same processing fee for records, while others do not)
- Oversized or individual objects
- Other (i.e., NAGPRA assessment, deaccessioning, short-term storage, special conservation, inspection)

The majority (47 out of the 58 repositories that charged fees) use some form of one-time, "in perpetuity" fee, even though it is virtually impossible to charge a fee that covers all the costs over the lifetime of a container of material remains or documents. Increasingly, repositories are instituting annual fees or fees that cover 5, 10, or 50 years of care, usually for federal or state collections. This allows repositories to adjust fees for inflation, changes in standards, or other unanticipated factors. Annual fees may be workable if an agency has a line item in its annual budgeting cycle for the curation of its collections, but this is quite rare. It is also difficult for agencies to pay for the care of collections in advance of the work to be accomplished, so such fee structures may have to be very carefully constructed in a curatorial agreement, if at all.

Another variable in the diversity of fee structures is the units of storage by which fees are assessed. Some units identified by repositories are by the cubic foot, by the box (of varying sizes), by the drawer, and by artifact number or size. For associated records, it is usually by the linear foot or linear inch. The cubic foot, the "box", and the linear foot (for records) are the most common units of storage for fee determination. It is important to understand the size of a repository's unit of storage and how much material can be appropriately stored in that unit when a project budget is constructed.

NPS INFORMAL CURATION FEES SURVEY
(adapted from Childs 1998)

Region	**Surveyed Repositories Without Fees**	**When Repository Instituted Fees**			**Range of "In Perpetuity" Fees for Objects***	
		70s	80s	90s	Per Box**	Per Cubic Foot
Northeast (18 repositories, 12 states)	11	1	2	4	$38-150	$100-250
Southeast (16 repositories, 11 states)	5	0	6	5	$75-227	$68-200
Midwest (24 repositories, 13 states)	10	3	6	1	$35-400	$70-250
Inter-Mountain (14 repositories, 8 states)	2	2	7	3	$150-225	$21-300
West (22 repositories, 7 states)	7	2	3	8	$65-1000	$250-1080

*The informal survey yielded little data on separate fees for associated records.
**The size of the "box" is not a consistent figure. Sizes (when defined by the repository) were stated as "standard", 12x10x10 inches, 1.3 cu. ft., 30 lbs., 1.04 cu. ft, 12x15x10 inches, and "small".

There is a wide variation in fees both within and between regions. Thirty-six surveyed repositories did not charge fees, yet at least ten of these were considering instituting some form of fee. The range of fees found in the survey is also not reflective of the "actual" cost of curation. Repositories have determined that the real cost of long-term curation is approximately $1000-1500 per cubic foot including the cost of utilities, materials, staff salaries, etc. Only repositories in the west charge anywhere near that amount. Most repositories have had to charge well below that to stay competitive. Many repositories base their fee structure on what nearby repositories charge, not on actual costs. Increasingly, repositories are placing collected fees in interest bearing endowment funds or accounts that will continue to provide funds over the long term and better cover the actual cost of collections care.

Regardless of repository fees, the total cost of managing a project collection is always going to reflect the volume of artifacts recovered and the associated records created during the project. In some cases, the cost can be lessened for the principal investigator (or owner, agency, developer, etc.) by using a well thought out collecting strategy that minimizes gross redundancies and non-cultural artifacts. Initial preparation of the collection by the principal investigator and staff can also cut costs at the repository. Cost controls can include bringing the collection up to the repository standards for packing, labeling, cataloging, cleaning, and documentation. In these days of rapid technological change, it can also involve careful selection of appropriate hardware, including digital cameras, software, and long-lived storage media when digital data is created.

Collecting strategy


Storage of oversize groundstone materials. *From the photograph collection of the Army Corps of Engineers, St. Louis District.*

A detailed collecting strategy is another essential element of a project design. It can affect a resulting collection's short-term care and preservation in the field and its long-term management and care in a repository, both the material remains and the associated records. The collecting strategy is different for every project, but should be based on the theoretical or compliance focus of the project and the phase of work to be completed (i.e., background research, survey, testing, excavation). Examination of existing collections from projects in the general area can be very helpful in understanding the range of material remains that might be found, as well as effective documentation. For compliance or contract work on federal, tribal, state, or local land, it should take into account any field collecting policies or guidelines for the planned phase of work (see Section III.) For either compliance or research, the collecting strategy should consider the long-term interests and concerns of culturally-affiliated groups and work to get them involved from the beginning of the project. Finally and if available, the collecting strategy should also consider the long-term research plan for the state or region in which the project will occur.

A well-planned collecting strategy makes the principal investigator's job in the field easier and ensures the physical, research, interpretive, and heritage values of the collected materials. Knowing the value of the collection is very important when justifying the costs of its long-term care.

Every collecting strategy should include the following:

- **Classes of Objects:** Identification of the classes of material culture expected to be recovered (i.e., ceramics, lithic, wood, etc.) and the classes of non-cultural materials (i.e., soil and radiocarbon samples) expected to be collected. The collecting strategy should also consider the expected range of variation for all classes of objects and specimens.

- **Types of Associated Records for the Project:** Identification of the types of associated records expected to be created during the project. It is increasingly important to consider if and how digital and other magnetic data will be created and collected, especially given the costs of reformatting and migrating digital data over time. Types of associated records include:
    - provenience information, e.g., field notes, photographs, sound and video recordings, maps;
    - analytical records, e.g., quantitative and qualitative data compiled during laboratory analyses;
    - administrative documentation, e.g., research design, proposals, contract, work scheduling;
    - project results, e.g., published books and articles, formal presentations, final reports (often gray literature that is produced in limited numbers);
    - personal papers, e.g., correspondence, diaries, email, report drafts, etc.

- **Time Periods or Occupation Levels:** Identification of the principal time period(s) or occupation levels that are the focus of the project. Documentation also should be included on any object classes from other time periods that may be disturbed or recovered in the process of getting to the focal time period(s) and how these materials will be handled.

- **Sampling Procedure:** Many archeological projects yield highly redundant materials, material remains that do not fit the project design, excessive numbers of non-cultural materials, and/or duplicative records. Given the costs of collection management, the current crunch on storage space, professional ethics concerning their recovery, and long-term care of and access to collections, an appropriate sampling strategy for the recovered object class(es) is important. Full consideration must be given to the research potential and the requirements of potential analytical techniques when developing the sampling parameters for an object class (see Section VI for more discussion on sampling). The potentials for research and legal and administrative record-keeping must be considered before any sampling is performed on associated records. All decisions and actions must be well documented.

- **Modification Provision:** There is always an unexpected element to archeological fieldwork, and all of the objects recovered and associated records created have value. These are reasons why a provision for modification is important in a project research design, collecting strategy, and curation agreement. The right to modify is especially important when working on federal lands. ARPA allows for the deaccessioning or discarding of "inadvertently discovered materials". If the possibility of unexpected finds is not acknowledged and dealt with in the project design, they can be removed from the collection after due process.

- **NAGPRA:** When NAGPRA-related items are likely to be discovered during fieldwork it is important (and required by the Act) to place provisions in the collecting strategy for these objects. These provisions should be prepared in consultation with the appropriate Indian tribe(s) or Native Hawaiian organization(s). Collecting strategies for human remains and NAGPRA-related objects should address whether they will be collected or left *in situ*, what research or analysis procedures may be undertaken on them, and what provisions are in place for the final disposition of the objects or remains (e.g., transferal to a repository or tribe for repatriation, reburial, etc.). Pre-fieldwork provisioning for NAGPRA can help avoid contentious issues regarding ownership and scientific use. It also can help to foster a mutually beneficial relationship between Native Americans, agencies, archeologists, and repositories.

  Note: NAGPRA relates to objects and their associated records, **not** to records with no associated objects.

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