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## **COLLECTIONS CARE AND CURATION OF DEPARTMENT OF DEFENSE OWNED AND CONTROLLED ARCHAEOLOGICAL ARTIFACTS AND ASSOCIATED ARCHIVAL DOCUMENTS**

Thomas James Braun

Many people would be surprised to learn that the Army, Navy, Air Force, and the other branches of the Department of Defense have in their possession voluminous collections of archaeological materials. Many people would perhaps not be surprised that most of these collections are not stored according to modern museum standards. Even worse, these collections are not even up to the curation standards prescribed in numerous federal laws pertaining to federal collections. Fortunately, this problem is being addressed by the Army Corps of Engineers. Addressing this problem requires cooperation not only among the different military branches of the Department of Defense, but also among federal agencies, Native American groups, and many other groups including conservators, curators, archivists, and collection managers.

In the last few decades, numerous Federal and State laws have been enacted which require the branches of the military to thoroughly document archaeological resources which are located on their property. The following table lists some of the more important laws; I will not describe each of these; suffice it to say that these laws are numerous and thorough.

### **GENERAL LEGISLATIVE AUTHORITY MANDATING ARCHAEOLOGICAL CURATION**

1906 Antiquities act (P.L. 59-209)

1935 Historic Sites Act (P.L. 74-292)

1966 National Historic Preservation Act, as amended (P.L. 89-665, 95-515, and 102-575)

1979 Archaeological Resources Protection Act (P.L. 96-95)

1984 Department of Defense Directive Number 4710.1

1990 36 CFR Part 79 (Curation of Federally-Owned and Administered Archaeological Collections)

These laws began what archaeologists today refer to as Cultural Resource Management. For example, when the military is about to build an artillery range, tank proving grounds, or airstrip, they must first survey the land for potential archaeological sites that will be impacted by the proposed military construction.

Before a military installation can use the land, archaeologists must conduct a survey, which is often referred to as a Cultural Resource Management Survey, and this work is generally contracted to private archaeological companies. Usually, the first step is to survey the land by walking over it and looking for artifacts on the surface. When significant artifacts are found, the archaeologists will often conduct shovel tests in which several small circular holes are excavated

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in the area. These shovel tests penetrate anywhere from a few centimeters deep to several meters deep. If significant artifacts are found in a shovel test, archaeologists will usually assign the location a Smithsonian Trinomial Site Number. This is often a number assigned by the State Historic Preservation Office (or SHPO). The Smithsonian Trinomial Site Number is a more or less standardized method of referring to a specific site, although the system varies slightly from state to state. The Trinomial is composed of the number of the state (from a list of all states arranged alphabetically), followed by usually two or sometimes three letters derived from the county the site is located in, and finally, a sequential number.

After the trinomial is assigned, the archaeologist may then conduct extensive formal excavations in order to better determine the full nature of the site. After all of these investigations are complete, (that is, survey, shovel tests, and excavation), the archaeologist will summarize their findings in a final report which is submitted to the military installation. Subsequently, the military installation will have to decide if they would like to have the site completely excavated, or if it would be less expensive to locate their activities elsewhere.

Federal law stipulates that all artifacts, notes, and associated documentation from the investigation belong to the U. S. government. Unfortunately, often these materials are treated poorly after the completion of the archaeological investigation. The materials may remain in the possession of the archaeologist, or, frequently, they will be warehoused in otherwise unused military buildings, bunkers, or shelters. Often they are packed away into re-used acidic cardboard boxes. Frequently, adequate shelving is absent, and the boxes are stacked on top of each other many boxes high, crushing the artifacts inside (Figure 1). These boxes may be so overloaded with ceramics and stone artifacts that they weigh in excess of sixty pounds. Sometimes they actually approach a spherical shape, and are literally bursting at the seams. Frequently, they have been packaged using poor-quality acidic newspaper or Kraft paper bags. Usually the associated paper records are stored in the same poor conditions as the artifacts. These documents may include oversized maps, survey forms, excavation permits, site forms, excavation notes, correspondence, photographs, draft reports, final reports, and even electronic files. Rarely are these documents housed in archival quality materials, and they are usually incomplete and disorganized.

However, starting about eight years ago, the Department of Defense funded a project for the Army Corps of Engineers to document all of the archaeological collections in the possession of the Department of Defense. I work for this office of the Army Corps. This office is called "the Mandatory Center of Expertise for the Curation and Management of Archaeological Collections, U.S. Army Corps of Engineers, St. Louis District." In Army Corps of Engineers parlance, a "Mandatory Center for Expertise" is abbreviated "MCX" and this term has a precise meaning. This means that all of the different districts of the Army Corps of Engineers are required to follow the directions of the Mandatory Center of Expertise. In other words, all archaeological curation activity within the Army Corps of Engineers is required to be administratively funneled through the St. Louis MCX. There are over a dozen other mandatory centers of expertise, such as the Hydroelectric Design Center, an MCX for the removal and disposal of dangerous buried ordnance, and an MCX for handling hazardous, toxic, and radioactive materials.

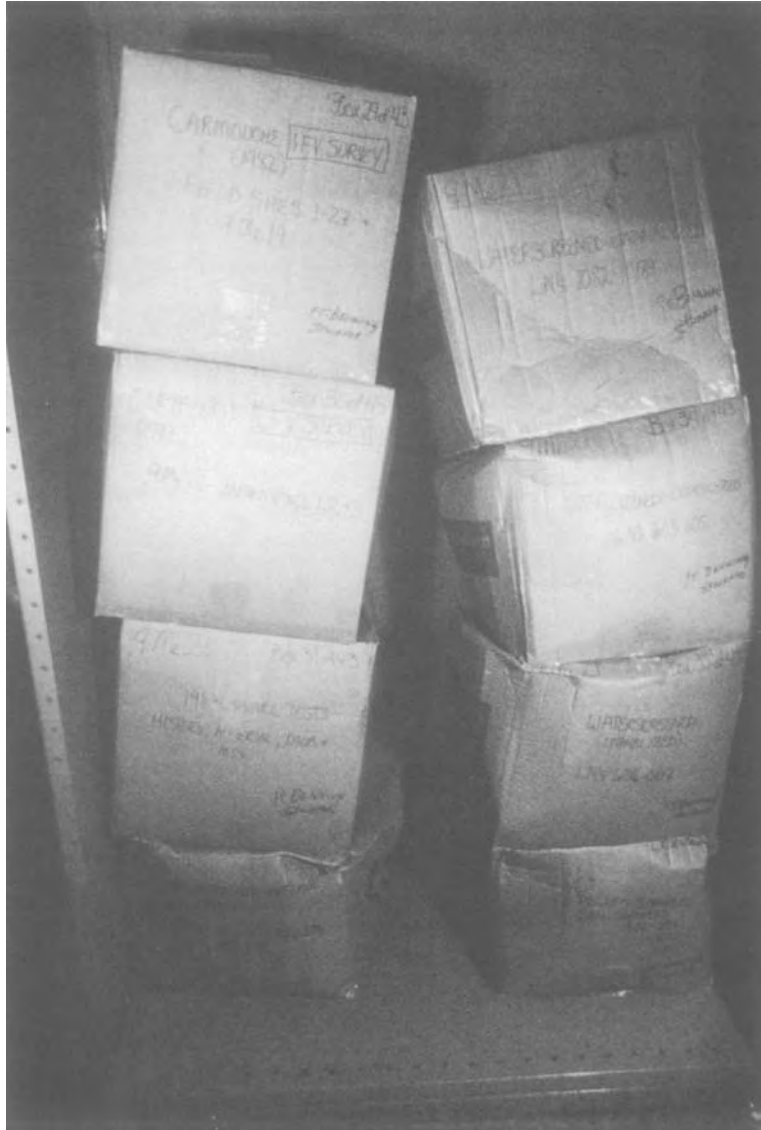


Figure 1. Artifacts in stacked boxes.

The eight-year project being conducted by this office has been assessing all of the archaeological collections stewarded for the Department of Defense, and not surprisingly, this has been a colossal undertaking. This effort has involved a staff of 30 people, including archaeologists, anthropologists, archivists, NAGPRA specialists, architects, and a conservator, myself. These individuals have traveled to over one hundred military installations, universities, and other repositories across the country in order to assess the archaeological collections held there. In June of 2000, this massive eight-year project will come to fruition and the report will be submitted to the Pentagon, and eventually, to Congress. Summarized in this report will be a listing of

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virtually all of the archaeological collections owned by the Department of Defense, and this report will also include information regarding the size and the condition of these collections. At this point, the best estimate for the size of these collections is over 60,000 cubic feet for all of the various branches of the military. Perhaps 10% of these collections are stored in conditions that approximate modern museum standards, while about 25% are in completely unacceptable condition; the remaining 65% are located somewhere in between (Figure 2).

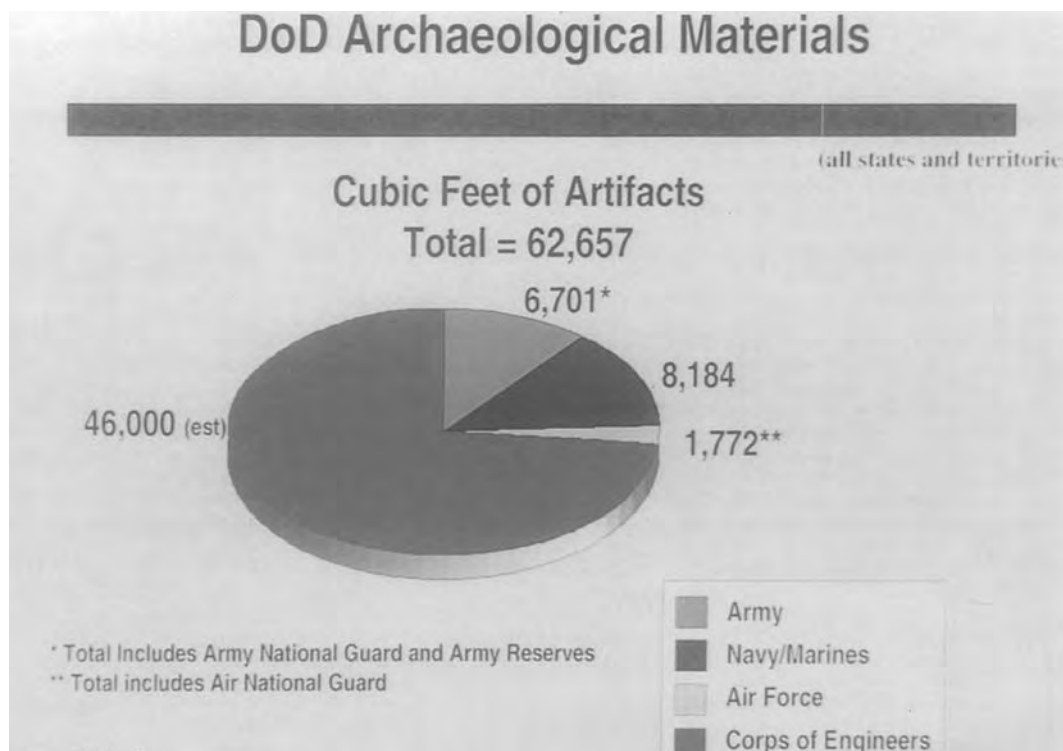


Figure 2. Cubic feet of artifacts owned by the Department of Defense.

Coupled with the final report on these collections is a similar assessment of curation facilities for archaeological collections on a state-by-state basis. This information is important to know, because if the Department of Defense is going to comply with the numerous laws regarding the curation of these collections, it must know about available regional facilities with the capability to adequately curate these collections and provide appropriate standards of climate control, fire detection and suppression, security, integrated pest management, etc.

So, we have the problem: 1) the collections are in bad shape, 2) we know of the solution; there are permanent curation facilities that comply with modern collections storage requirements. So, thirdly, what we need now is someone to process these collections so that they will be acceptable to the permanent curation facilities, many of which have stringent requirements for incoming collections. These basic requirements often include; that the collections must be well organized

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and thoroughly documented, stored in standard-sized archival storage materials, and that these boxes each weigh no more than 30-40 pounds. After these federal collections are brought up to the standards of the curation repository, the military installations that control these collections can simply turn them over to the repository for permanent and professional curation.

Because the St. Louis MCX has nearly completed the eight-year assessment of Department of Defense collections, they have started several pilot projects in order to pursue this solution. This has been my task. After the Department of Defense identified several collections that had the most critical need of attention, we contacted the facilities where the collections were stored, and made arrangements to transfer the collections to the MCX facilities in St. Louis, Missouri. Here the collections will stay for the duration of several years while they are processed and rehoused. I should note that there are no plans for a central, national repository; eventually, all of the collections will be returned to their state of origin for permanent curation and storage.

Currently, the St. Louis MCX is rehousing two major collections each from different Army installations; Fort Benning in Georgia, and Fort Lewis in Washington State. Both military installations are unique in that they are located on lands with significant and voluminous archaeological resources.

As the collections are received, they are often in very poor condition (Figure 3). One box (Figure 4) became wet from a leak; notice the cardboard has delaminated from exposure to water, the walls have collapsed, and the contents of the box have been crushed by the weight of the boxes stacked on top. Many boxes lack covers or lids, exposing the contents to the accumulation of dust and debris, and often leading to a loss of the arranged order of the artifact bags, in addition to the exposure of light to the labeled bags, which were often written using fugitive inks (Figure 5). The boxes and the bags of artifacts inside are often poorly and incompletely labeled, and usually housed in poor quality acidic materials, using rubber bands, masking tape, fading inks, and bags that tear and mix unlabelled artifacts of different provenience. One collection (Figure 6) had unique problems; the box was an unusual shape, being wide and long, but shallow, and would not be acceptable to most permanent repositories. In addition, the objects were stored on open meat trays made of cardboard or polystyrene, causing easy misplacement of the artifacts. Finally, not all of the artifacts were labeled, so when they were misplaced, the provenience was often lost. The real shock with this collection is that it was formed by the fieldwork used for a Ph.D. dissertation. Today, the student who compiled this collection during his dissertation is one of the foremost professors in North American archaeology and anthropology.

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Figure 3. Artifacts as received by storage facilities.

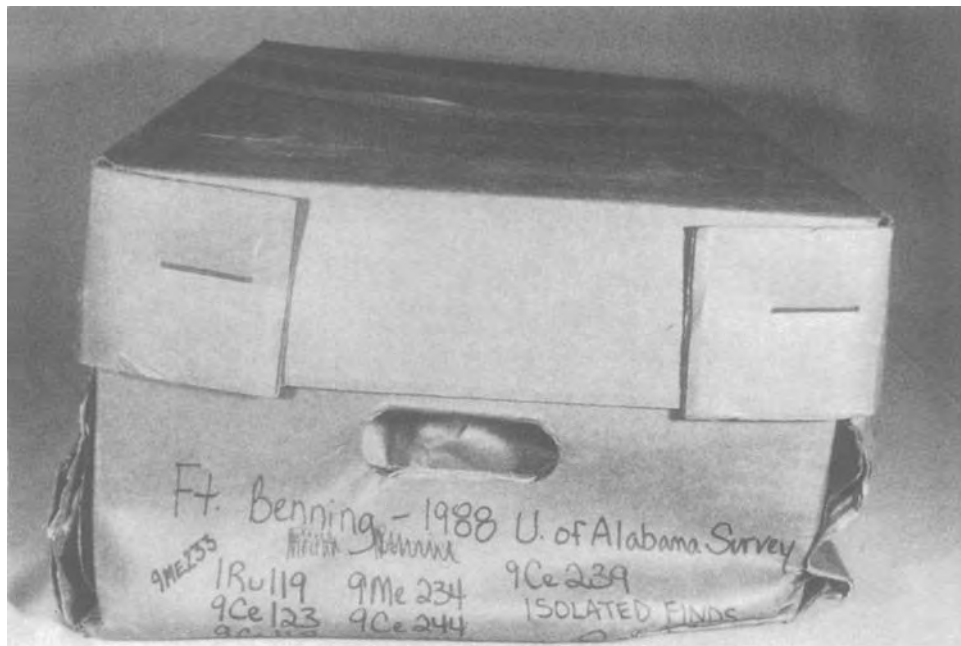


Figure 4. Box crushed by weight of other boxes, and delaminating due to water exposure.

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Figure 5. Deteriorating bag and fading labels.



Figure 6. Unlabeled artifacts stored on open trays.



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Often artifacts with different storage needs are housed together (Figure 7), in this case, ceramic sherds and lithic tools have been stored in the same bag with bone fragments, friable shell artifacts, charcoal, and several large stones. Clearly, at a minimum, the sharp and abrasive artifacts like the lithics and ceramics should be isolated from the softer, easily damaged charcoal, shell, and bone artifacts. What is especially tragic about this situation is that while many of these collections are not terribly remarkable, there are a great deal of very significant, unique, and important artifacts in these collections. By far the most common artifacts of significance are ceramics and stone projectile points. Some of the most beautiful examples of North American lithic tools were found at Fort Lewis in Washington State. In this area of the country, there is an abundance of raw materials available for making these tools. While rare, we also on occasion find organic remains that have survived within the archaeological context.

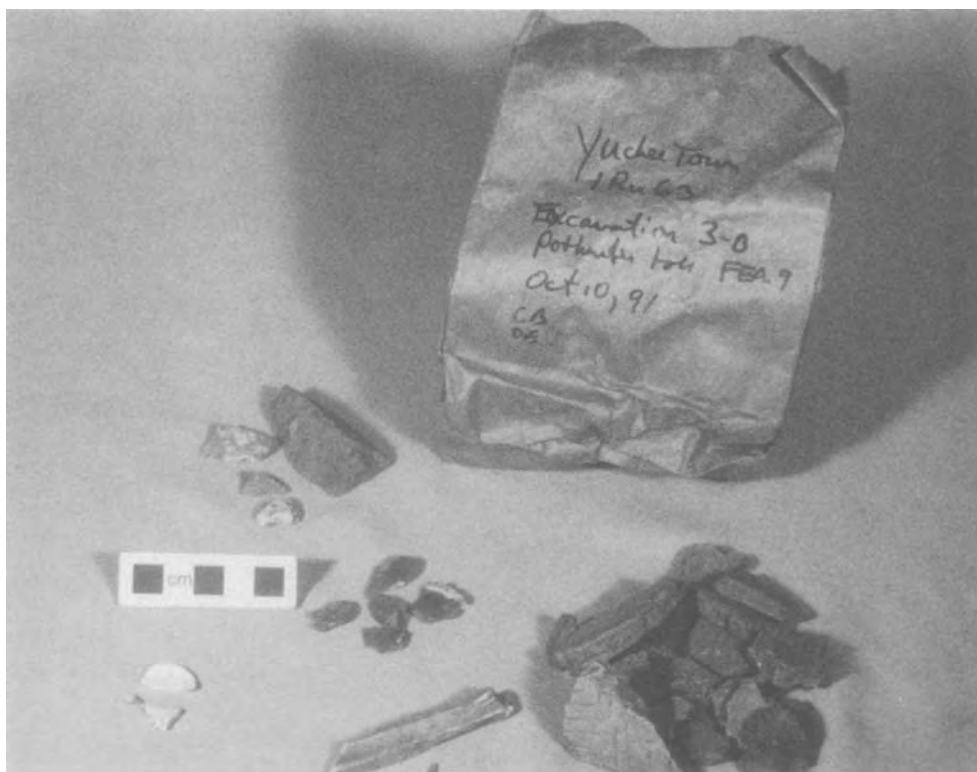


Figure 7. Incompatible artifacts stored together.

The first step in the rehousing process is to remove the bags from the boxes and try to ascertain their proper provenience order. After this is done, the information from the bags (at times supplemented by information available from the final report) is entered into Microsoft Excel, a spreadsheet program. The artifacts are then transferred to a 4-mil polyethylene resealable bag (i.e., Ziploc). This has one advantage in that being clear, artifacts can be examined later without removing them from the bag, thus reducing handling. The original bag (or the part of the bag

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with the provenience information written on it) is retained, isolated in another plastic bag, and stored along with the artifact. After processing the collection in this manner, all of the bags of artifacts are arranged in order within acid-free corrugated cardboard document storage boxes. Typically, these document storage boxes are the standard size accepted by most permanent curation repositories, whose shelving has been designed to fit boxes of just this size.

After all of the data from the artifacts has been entered into the database, the data is sorted, scrutinized, codified, and where possible, minor corrections made. In our contract with the military installations, we stipulated that while it was cost-prohibitive to individually direct-label each artifact, we would label the outside of the bag, and insert an acid-free paper label inside the bag along with the artifact. We use acid-free, foil-backed, acrylic self-adhesive paper to label the outside of the bags (Figure 8). We use 8 1/2 by 11 inch label stock, on which we can print 15-21 labels per sheet. An identical set of labels is printed on acid-free paper. After the labels have been sorted by provenience, they are printed onto the acid-free paper and label stock, then they are cut into individual labels. Subsequently, the labels are matched with the bags of artifacts. In Figure 8 you see three steps in the labeling process: 1) matching the artifact to the labels, 2) inserting the acid-free paper label in the bag, and 3) applying the foil-backed label to the bag, with the original labels inside. We make sure to laser-print all of the labels, as the ink-jet process has proven to have limitations in permanence.

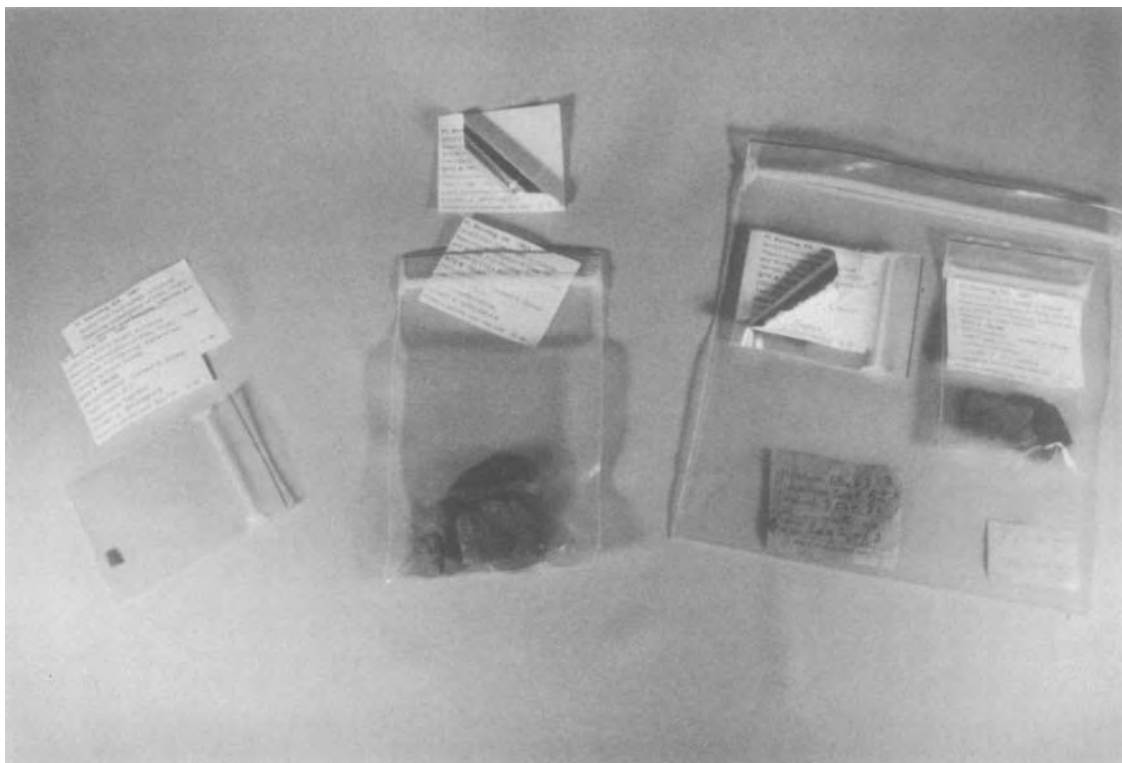


Figure 8. Labeling objects in new bags.

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As each collection is rehoused, we generate a short report describing how the collection was processed, and then print out a final hard copy of the database. After bag labeling is complete, a label is completed for the outside of the box, which includes the site number, the name of the archaeologist, a bibliographic citation of the archaeological report, the year the fieldwork was conducted, and a box count, for example, "this is box five out of a total of 12 boxes" in a particular collection.

After the completion of a single collection, there is little left to do for the artifacts but store them until the entire collection is ready to be returned to the state of origin. At this point, we place the boxes in a special holding area where the climate is kept as cold and dry as our air handlers can achieve. This storage facility conforms to the so-called "envelope within an envelope" architectural design recommended for such facilities, making it possible to detect leaks before they can cause damage, and helping to provide excellent and stable climate control. After the collections are returned to the appropriate military installation, they will eventually be housed in a non-governmental curation repository which will receive periodic payments to curate the collections in perpetuity. We will provide a compilation of all of our final reports to the military installation and the curation repository upon completion of the entire collection. With the completion of our project, we will supply our report, in addition to a CD-ROM copy of the electronic database files, so that the collections can be better managed and administered in the future.

Issues related to the Native American Graves Protection and Repatriation Act (NAGPRA) are also a large part of our work. Typically our contract requires us to separate out any human remains for return to the military installation for potential repatriation to appropriate tribes.

My time at the St. Louis MCX is spent mainly working with the artifacts, and in figure 9 you see a collection before and after treatment. However, the associated archaeological archives are also processed at the MCX by a team of archivists, and Figure 10 shows a collection of papers before and after treatment. I assist them with minor dry surface cleaning and mending of torn documents, but most of the processing is done by the archivists. In Figure 10 a box of disheveled and disorganized files has been sifted through, transferred to acid-free folders, each labeled with a graphite pencil, and arranged in chronological order, inside an acid-free corrugated cardboard document storage box. The archivists produce finding aids which will greatly assist researchers working with these collections.

In conclusion, the Corps of Engineers has been processing collections in this manner for a little over two years, and we are about to finish our second and third complete collections. There is a tremendous amount of work ahead of us, and the processing of all of these collections on a nationwide scale could encompass several decades and many millions of dollars. Ironically, while the Department of Defense spends only a tiny fraction of its huge budget on this type of work, this tiny fraction amounts to an enormous amount of money by the standards of our field. At the MCX we are still learning from our mistakes and streamlining our procedures, but the future looks bright for us to continue on this track.

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Figure 9. Object collection before and after treatment and rehousing.



Figure 10. Object records before and after treatment and rehousing

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### **Supplies**

Resealable plastic bags are supplied by Chiswick Incorporated, 1-800-225-8708

Foil-backed self-adhesive laser labels are supplied by University Products, 1-800-532-9281

Acid-free corrugated document storage boxes are supplied by the Paige company

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