Utah Museum of Natural History

Preparing Prehistoric Archaeological Collections for Reposit

Although the Museum is also known as the Natural History Museum of Utah (NHMU), the legal name Utah Museum of Natural History and the acronym UMNH will be used for this document.

Table of Contents

Introduction

The Utah Museum of Natural History (Museum or UMNH) serves as the State designated repository (Utah Administrative Code R807-1) for archaeological collections acquired under permit from state lands in Utah. Additionally we reposit Federal collections. Criteria for determining whether the Museum will curate a collection are in the Museum's formally adopted Collections Management Policy (CMP) and in compliance with Utah State law. Reposited materials will be curated in accordance with the Museum's established CMP and these procedures.

STEP 1: Apply yearly for a UMNH Repository Agreement

The Museum will review Repository Agreement applications from contract companies, research institutions and land management agencies to curate prehistoric archaeological artifacts.

Application must be submitted in the name of an organization or institution, with the Principal Investigator (PI) serving as applicant and manager of the agreement. There are three requirements for application:

1. The applicant's organization must have applied for a UMNH accession number under the previous agreement or notify UMNH that no collections were made under the previous agreement, listing the agreement number. (There is a place on the application to note this.)
2. The application fee is due at time of application submission.
3. A shortened CV of the PI must be submitted every 3 years or if there is a change in organization.

All efforts should be made to submit applications prior to the end of the calendar year for most efficient processing, and to ensure the agreement is in place when the PI is applying for a new permit.

UMNH repository agreements are valid for a maximum of one calendar year. UMNH repository agreements will always have a December 31st expiration. The PI must apply for a new agreement each year if they anticipate collections to be made, despite the expiration of the permit. If a permit transcends the end of a calendar year, it is the responsibility of the PI to reapply for a new repository agreement to cover the term of the permit.

All projects conducted by an organization will be covered by the same agreement. However, firms with multiple branches should apply for separate agreements. Please note that when applying for accession numbers **each collection from a different land owner/ manager** will require a different accession number.

At the end of each calendar year, holders of UMNH repository agreements who have collected under the agreement are required to apply for accession number(s). If a repository agreement holder did not collect under the agreement, they need only note this (with the previous year's agreement number) on the following year's repository agreement.

STEP 2: Request Accession Number(s)
(Request after collections are made prior to end of calendar year)

The purpose of the unique UMNH **accession number** is to link all appropriate legal data for collected objects or specimens together. Information includes: the source of the material (i.e. repositor), the investigator, the year in which the work is carried out, land manager/owner at time of collection, the permits, project numbers, etc.

It is the responsibility of the PI to request an accession number prior to the end of the calendar year the collections were made, and prior to processing the collection. To request an accession number, submit the online form found on the museum's website, https://nhmu.utah.edu. Submission for an accession number must include copies of all valid collecting permits for the collections. **Collections will not be accepted from third party researchers**. Instead, those researchers should return material to PI/repository agreement holder for delivery to the Museum.

Only the UMNH registrar is authorized to assign UMNH accession numbers. The accession number (e.g.: UMNH.A.2013.15) is a required element of object numbering.

STEP 3: Prepare the Collections for Repositing

All collections to be reposited at UMNH must be prepared according to the following guidelines. No other techniques for preparing collections are presently accepted. Collections prepared in a manner that do not follow these guidelines may be refused at the discretion of the museum and the permitting agency will be notified. If the PI has made a good faith effort to discuss the curation procedures with the museum in advance, we will work with the individual to determine an acceptable solution in a reasonable period of time. The Museum will accept only **complete** collections from each site or project, rather than collections that have been divided among several repositories.

A. Labeling

It is required that a three-part **identifying label** be applied to all objects prior to reposit.

> For example:
> 42SA345 (site number)
> FS400.1 (unique object number)
> UMNH.A.2003.15 (accession number)

1. Site Number

The Smithsonian Institution Trinomial System shall be used to identify sites. The first part of the number is the state identifier (a number given to states in alphabetical order in 1948, so Alaska and Hawaii are 49 and 50). The second part of the number is a two letter abbreviation for a county within the state (determined by the state) and the last part of the site number is a number identifying a particular site in that county.

For example: 42IN24

42	Utah
In	Iron County abbreviation
24	24th site found in Iron County

Each three-part site number must be unique to one site, no matter the number of investigating organizations or years of work. Every effort should be made to standardize site numbers for old sites that may already have been assigned a previous designation. Site numbers are assigned by:

> Archaeology Antiquities Section
> Utah Division of State History
> 300 Rio Grande, Suite 210
> Salt Lake City, UT 84101
> 801-533-3500

2. Unique Object Number

While cataloging systems may vary, the end result must be that **each specimen will receive a unique individual number** used to trace its provenience. The object number must be associated with ALL records, (field, lab and final project). A complete and clear description of the object numbering system must be included in the associated records.

The unique number will refer back to its lab analysis and field provenience. A complete number/object log will be a required record, since it will have reference back to the object's provenience. This information is especially important for future researchers, as well as for museum staff as the objects are catalogued into the museum's collections database. To accommodate the museum's computerized database, an alphabetical identifier, followed by the unique object number (either assigned in the field or in the lab after analysis) should be contained on a single line.

If the number has an extension, a decimal point must be used instead of a dash (e.g. FS400.1). If FS is not used, then another identifier should be given such as FN, IS, IF and then a number.

Example: museum's catalog number for an object identified as FS400.1 from site 42SA345 would be "42SA345FS400.1".

3. **Accession Number**

This is the number initially assigned to the project by the UMNH registrar. **See step 2.** Please note that the accession number must appear on all paper records, ideally in the upper right hand corner.

B. Application of Number/ Marking

1. **Marking**

Artifact numbers must be applied to the individual objects, either by hand-numbering or application of paper labels. Protocols for printing and correctly adhering labels to objects can be found in the appendix.

When writing numbers on artifacts, they should be written carefully, and legibly so similar numbers will not be confused (i.e. "4" and "9" and "1" and "7" , or 3 and 8 should all be clearly distinct). When labeling artifacts directly, use the smallest size of numbers possible. Numbers should be placed in a location that will not disfigure the object or obscure a worked face, but can be seen easily with a minimum of handling when the artifact is in storage. Avoid putting the number in an area that is subject to abrasion – for example, the position on the bottom of a vessel. When it is **not** possible to directly mark the artifact, the catalog number can be written on an acid-free paper tag and tied to the artifact. If it is **not** possible to attach a tag (perhaps the object is too small to have numbers written or tied to it, 1 cm or less in size), then it should be placed in a polyethylene bag or vial with a numbered paper tag.

When it is absolutely necessary to group artifacts, such as debitage bagged and assigned a number as a group, the FS number should be written on a paper tag and placed with the artifacts inside the bag. If there is more than one bag for each assigned FS number, then each bag should be given a "bag number".
For example, the first of 4 bags of debitage with 15 objects would be labeled:

42In124FS54.23
UMNH.A.2003.15
Number of Objects: 15
Bag 1 of 4

2. **Best Practices for various artifact materials**

   a. Lithic, ceramic and most other types of artifacts should be prepared for labelling by applying a base coat of clear Acryloid B-72 [polyvinyl acetate] in an acetone base. The catalog number is then written on the base coat with black archival permanent ink and sealed with a top coat of clear Acryloid B-67 (naptha base), or Acryloid B-72 (acetone base). When applying the label, we have found that each layer must be completely dry (24 hour cure is best) before applying the next layer. Various conservation supply companies carry suitable product lines (see Appendix E).

b. If it is not possible to write directly on the object (textiles, wood, hair, feather and some bone objects), then an acid-free paper tag should be labelled appropriately and attached to the specimen with a 100% cotton string. Textiles can be labeled by marking the object number on 100% unbleached cotton twill tape that can then be sewn to the textile with silk or cotton thread. Please consult with the anthropology collections manager about acceptable labelling methods for fragile perishable objects such as basketry, hide, feathers or textiles.

c. If using polyethylene vials, the vial should be labeled on the outside with permanent, archival ink, with an acid-free label inserted in the container identifying the object.

d. Environmental materials, soil, C-14 or other similar samples should be dry and placed directly in polyethylene bags with an acid-free paper label in a small bag that is placed inside the sample bag. C-14 samples should be wrapped in aluminum foil before inserting in a polyethylene bag. If paper bags are used in the field, these bags should be placed inside a polyethylene bag for proper storage. Fractions from processed samples can be housed the same way.

e. Micro-slides should be labeled using the lithic and ceramics technique described above, and put in polyethylene foam sleeves, purchased polyethelene slide holders, or a cavity mount to protect the slides.

If repositing oversized maps, they should be transported in tubes. If multiple maps are in a single tube, please include an inventory. Label the outside of the tube with the associated:

Accession number
Site and/or Project number(s) and/or name(s)

C. Storage Methods for Objects

Due to limitations of museum storage, size and weight of storage boxes are restricted. Artifacts to be reposited at the Museum must be placed in acid-free, (pH neutral is acceptable) corrugated, lidded 12" x 15" x 10" (ca. 1.3 cubic feet) standard boxes**. Exterior measurements for standard boxes cannot exceed 13" W x 16.5" L x 10" H**. Archival boxes from Gaylord (WW-TC1215), Hollinger Metal Edge (RSB-18), and ULINE (S-15180) meet the size and weight standards. **Weight is restricted to 30 lbs. per box.**

Oversized boxes (exceeding one or more standard box dimension or weight) containing objects to be reposited will be charged for the entire space required to store the box.

When preparing materials, use the following guidelines:

1. Organics and inorganics should be boxed separately when possible because they require different conservation environments.
2. Artifacts should be organized by general material type, either by boxing them separately, or segregating them in some way. Organize materials within the box by object number when each contains several items. Pieces of acid-free corrugated board can be used to construct internal dividers. Contact the anthropology collections manager for approval and questions about packing very small quantities of unlike materials.
3. It is best that large, heavy artifacts **not be** boxed with small, fragile objects. If they must come in the same box, heavier objects should **always** be placed on the bottom of the box, with lighter objects separated, and supported on top.
4. Fragile artifacts should be supported and protected within the storage box by padding with acid-free tissue, or creating a cavity mount to hold the object. White, polyethylene foam can be used to support, cushion or be used to create a cavity mount for these objects. Please contact the anthropology collections manager if there are questions about support of a fragile object. Smaller boxes or containers are often

useful in supporting and protecting these objects. Artifacts should be packed so they will not be abraded or crushed.

5. All ground stone should be placed in separate, polyethylene bags to prevent contamination. Some skeletal materials, large ground stone, and/or extremely fragile artifacts can be reposited in alternate containers after prior consultation with, and approval by, the anthropology collection's manager.
6. Artifacts from different sites should not be placed in a single box unless approved by the UMNH anthropology collections manager. For survey collections where many sites may be packaged in one box, artifacts must be separated by site number with acid-free corrugated board internal dividers.
7. Legibly label the end of the box (not the lid) with a brief description of contents with archival black ink. A box inventory sheet must be placed inside each box listing the accession number, site number(s), all object numbers and a brief description of contents.

Box Label example:
42In412
FS400.45 – FS400.79: Debitage
FS654.34 – FS654.99: Projectile Points
UMNH.A.2003.15

Please consult with the anthropology collection manager about packing fragile or vulnerable materials such as whole or restored ceramics, disarticulating basketry artifacts, crumbling clay

AUTHORIZED materials

Materials that <u>should</u> be used for preparing collections to be reposited at UMNH include*:

Acid-free tissue (suitable for all artifacts)
Acid-free calcium carbonate (3%) buffered tissue (suitable **only** for plant materials or artifacts made from plant fibers.)
Acid-free paper (minimum 20 lb. weight)
Acid-free board and/or corrugated board and map tubes
Acid-free metal edge document boxes (i.e. clamshell boxes – documents must be reposited in standard size, 2" or 5", archival, clamshell boxes.)
Archival gold discs (for electronic images and records) - CDs or DVDs
Virgin polyethylene (i.e. photograph sleeve pages, artifact bags, planks [e.g. Ethafoam™], etc.)
Plastic clips for documents (e.g. Plastiklips™)
100% natural cotton twill tape
Pencils (are always archival)
Specified black, permanent, archival, acid free ink pens for artifact labeling (currently only Zig™, Staedtler™ and Pigma™ are approved)
Permanent, acid-free, archival ink, such as India ink, if using quill, fountain or mechanical pens.
Black markers for labeling box exteriors only
Polyvinyl acetate (PVAC) (e.g. B-72 with solvent of Acetone or B-67 with a solvent of Naptha)

Materials to AVOID

Materials that <u>should not</u> be used for preparing collections to be reposited at UMNH include*:

Cotton or wool batting
Acidic cardboard or unknown paper products
Metal paperclips (coated or uncoated)
Elastic bands
Staples
Non-archival adhesives, tapes or labels
Common ink or ballpoint pens
Newspaper
Packing "peanuts" of any variety
Any materials of unknown composition
Common foams (i.e. polyurethane, etc.)
Polyvinyl chloride (e.g. PVC)

*this list is subject to update as necessary

D. Associated Records

1. Required Documentation

Collections will not be accepted by the Museum without **all** associated records. All records must be legible and provided in both hard copy and digital formats. Hard copy documentation must be an exact duplicate of digital documentation and organized in comparable folder systems.

Because the associated records are an archival copy of your work that will be used by both museum personnel and future researchers, they must be complete. Documentation should include, when applicable:

Permits
Description of the object numbering system
Final Inventory of all objects reposited (do not include non-reposited objects)
Survey sheets (e.g. IMACS, Utah Archaeological Site Form)
Excavation notes
Field specimen and feature logs
Photographic logs and prints
Lab/analysis sheets
Maps and stratigraphic profiles
Project reports
Box inventory of reposited artifacts
Publications referencing objects reposited

All documentation must reference material by object number to facilitate data entry and retrieval. It is especially important that provenience data (feature, stratum, horizontal and vertical coordinates, etc.) for each artifact reposited be included. For site numbers, please adhere to current SHPO requirements for the state in which the site is located.

MS Excel templates are available online for site information, project (expedition) information, isolates and object templates and analysis. The templates can be downloaded from our website under Collections & Research; Forms & Policies. In addition to all associated records required, the Museum requires data be entered in our template. **Do not make changes to the template headers**, as these have been designed to upload data directly into our collection management system.

Any materials released or destroyed during analysis (e.g. radiocarbon dating) must be accounted for in the written documentation of the project. Collections will not be accepted from third party researchers. Instead, those researchers should return material to the PI/ repository agreement holder for delivery to the Museum.

If field identification labels (such as feature numbers, strata numbers, or labels) differ from report identifiers, a correlation table must be included. This is necessary to allow museum personnel to aide future researchers in using this material. The project records should be arranged in a coherent order (as determined by the repositor) and each file folder should be clearly marked in pencil on the upper left corner. The organization of the hard copy records should be the same as the digital records. It is expected that associated records are complete and filed under appropriate headings, e.g. survey/site forms, field notes, maps, excavation notes, lab/analysis forms, photographs, permits, final/project report, and box inventory. The digital records should reflect the same file organization.

2. Paper Records

Because UMNH cares for collections in perpetuity, all records and documentation must be on white acid-free, archival-quality paper. If originals are illegible, damaged, dirty or do not meet above paper or printing criteria, provide legible photocopies. Unless absolutely required, all pages should be 8.5” x 11”. If legal sized paper is used for any documents, all documents should be housed in legal sized folders and boxes. No documents should be folded. Documents printed using an electrostatic process (e.g. laser or xerographic), may be double-sided. Paper records must **not** be stapled, paper clipped or bound in any other way, with the exception of the bound final report (see below).

Paper records must be submitted in archival, metal-edged document boxes. Gaylord, University Products and Hollinger Metal Edge meet the archival requirements and size for the museum. Do not label the document boxes.

Over-sized maps must be submitted in a separate map tubes made from acid-free, lignin-free, buffered, 10 or 20 pt. folder stock that passes P.A.T. All map legends should include the museum accession number.

Two color copies of the final project report should be submitted (double sided is acceptable); one bound copy and one unbound copy. The unbound copy should be placed in a separate folder and boxed with the site records. The UMNH accession number must be in the footer or header of all reports.

3. Photographic Records

Photographic records provide an essential component of project documentation. It is anticipated that all images reposited with the UMNH will be born-digital. Therefore, all photographic submissions should include:

a. laser-copy prints of each image (two images per 8 ½" x 11" page is acceptable) on acid-free paper
b. a photographic log to accompany the laser copied prints
c. individual 4" x 6" professional prints of all images using ink jet, laser, or dye sublimation processes

These three professional printing processes (ink jet, laser, or dye sublimation) are available at many retail locations and online photo processors. Prints made using a desktop printer are **not acceptable** due to the instability of the color fastness.

The laser-copy prints (a) and photo log (b) should be filed in the document box. The individual prints (c) must be filed in paper photo envelopes (up to 20 photos per envelope) that meet archival specifications and pass the photographic activity test (P.A.T.). Gaylord® (80 lb. Text Print Envelopes), University Products (photo envelopes Item#670-4757), and Get Smart Products (Item#F-PH-ENV) are examples that meet the archival requirements and size for the museum. Label the envelopes with the accession number and a list of enclosed photographs in pencil or indelible ink. In order to maintain the highest quality images for long term curation, we recommend that you print and house the images no sooner than three months before you are ready to reposit at the UMNH.

Thorough documentation of images using a photo log and a logical numbering system is required. The following documentation for each image should be recorded on the photo log:

Date of photograph (year, month, day)
Photo number (format: site number_unique number; e.g. 42SA375_1)
Subject (brief description of image subject with full names of any individual pictured)
Provenience
Photographer's full name

Each laser printed image can be labeled on the front of the sheet with the photo number. Each individual photographic print should be labeled with the photo number and date (back, upper left corner) in a soft lead pencil (e.g. 5B). In both instances, naming format should match the digital file name; SiteNumber_Photo#PColor _YYYYMMDD (e.g. 42SA375_1Pc_19570721 or 42SA375_1Pbw_19570721).

For previously recorded sites which are being revisited, please check with museum staff to assure that duplicate photograph numbers are not assigned.

During the preliminary organization of records to be reposited, redundant, irrelevant, and poor quality images should be edited and culled out. This important step results in a higher quality photographic record, less time needed for documentation, and lower costs for supplies and storage.

4. Digital Records

All electronic data should be recorded on an archival gold CD or DVD in archival sleeves or holders and should be a duplicate of what is submitted in hardcopy. Several file formats are acceptable as archival for archaeological records (see Caring for Digital Data in Archaeology: A Guide to Good Practice; a free version, posted by Archaeology Data Service, can be found online.)

File formats for digital documentation:

Acceptable archival file formats for documents and text include: PDF/A

Acceptable archival formats for, datasets, databases and spreadsheets include: .CSV, .ODS, .XLSX, .XML.

Acceptable archival file formats for raster-based images (e.g. photographs) include: .DNG, and uncompressed .TIF (.TIFF)

Acceptable archival file formats for vector-based images (e.g. maps) include: .PDF/A

Maps related to the site and/or report may be embedded in the appropriate PDF/A version of the site or project report. If the size or scale of the map requires that the printed copy be submitted separately, the digital file should be submitted as a separate PDF/A in a map file folder.

For digitized materials: files should be saved with a descriptive file name using the following conventions. Slight modifications to these formats to accommodate your unique project (such as adding a number to distinguish multiple report volumes) is acceptable. Make sure to include year created, even if month and date are not known:

Digital Photos: SiteNumber_Photo#PColor _YYYYMMDD
Black and White: 42SA375_1Pbw_19570721
Color: 42SA375_1Pc_19570721

Digital Documents: SiteNumber_DocumentType_YYYYMMDD
42SA375_siteform_19570721
42SA375_excnotes_19570721
42SA375_lithicanalysis_19570721
42SA375_report_19570721

Digital Maps (if not part of a larger document): SiteNumber_MapNumber_YYYYMMDD
42SA375_1map_19570721

For more information on appropriate ways of managing archaeological data, see *Caring for Digital Data in Archaeology: A Guide to Good Practice* or the online version of Guides to Good Practice

STEP 4: Dropping off Collections

A. Set an Appointment

As both the registrar and the anthropology collection manager must be present for drop off, an appointment must be made. UMNH requests 30 days advance notice of intent to reposit processed collections. It is best to contact both registrar and collection manager by email, with some suggested days and times. The Reposited Collection Checklist form (found on the website) should be sent with scheduling request.

B. Curation Fees

UMNH will be compensated for the curation of collections reposited by the fees as outlined in Appendix A. Fees are subject to revision by the museum. Payment must be made before or at the time collections are reposited. No collection will be accepted before fees are paid. Any deviations must be requested in writing and approved by UMNH, and presented at drop-off.

C. Drop-off Documentation

A final Reposited Collection Checklist form must accompany each accession number being reposited. UMNH staff will give (or email) preliminary notice of receipt when a collection arrives at the Museum. This form with preliminary acceptance usually suffices for agency reporting requirements. However it is the responsibility of the permit holder, not the repository, to submit this to the land manager/ agency.

If Museum staff discovers any discrepancies between the depositor's inventory and the actual deposit, the repositor will be notified so the discrepancy can be resolved. If the collection does not satisfy the conditions specified in these procedures, then the collection may be refused at the discretion of the Museum, and the permittee and agency notified immediately. In such cases the Museum will assist the permittee or agency in determining what must be done to rectify the problem(s). When Museum staff has inventoried the collection, a final approval will be emailed to the repositor.

D. Pest Management

UMNH will undertake measures necessary to ascertain all incoming materials are pest-free. The Museum follows an Integrated Pest Management Plan to insure the collections currently in the facility are free of pests. All incoming material will be isolated and put in a -30°C environment for 7 days before being placed in permanent storage. To prevent moisture loss during freezing, all objects must be in sealed, polyethylene bags, and documents should be placed in archival boxes that can be wrapped and sealed upon arrival. **If the repositor has reason that freezing may be detrimental to the stability of some objects, this concern should be brought to the collection manager's attention at time of scheduling, in order to develop an alternative isolation plan.**

Appendix A
Curation Fees

UMNH will be compensated for the curation of collections at the following rate with the fee schedule effective 2017. Due to the rising costs of resources there will be a 3% annual increase. Fees will be assessed based upon the year collections are **submitted** to the Museum for curation. Please budget for curation costs accordingly. All prices are in US dollars.

	Effective 05/01/2017	Effective 1/1/2018	Effective 1/1/2019	Effective 1/1/2020	Effective 1/1/2021
Archaeology archival box (1.3cu ft)	$600.00	$630.00	$660.00	$690.00	$725.00
Document Box 2” clamshell	$85.00	$90.00	$95.00	$100.00	$105.00
Document Box 5” clamshell	$200.00	$210.00	$220.00	$230.00	$240.00

Oversized material (material exceeding one or more standard box dimensions or weight limitation) will be assessed by the number of standard boxes the material displaces.

Appendix B
UMNH Collections Personnel

Before mailing anything, please contact
BOTH Registrar and Collection Manager.

Museum Information
Natural History Museum of Utah
University of Utah
301 Wakara Way
Salt Lake City, UT 84108

801-581-6927
Website: www.nhmu.utah.edu

Registration

Janaki Krishna
Registrar
801-585-7484
jkrishna@nhmu.utah.edu
or registrar@nmhu.utah.edu

Forms and policies:
https://nhmu.utah.edu/collections/policies-forms

Anthropology

Glenna Nielsen-Grimm, Ph.D.
Anthropology Collections Manager
801-587-5746
gnielsen@nhmu.utah.edu

Lisbeth A. Louderback, Ph.D.
Curator of Archaeology
801-585 2634
lisbeth.louderback@anthro.utah.edu

Appendix C
Accessibility
Excerpts from UMNH Collections Management Policy (CMP), full version available on website

Access Policy
Access to the collections provides opportunities for research and education. However, measures must be undertaken to preserve the integrity and security of the collections. Access to collections must be pre-approved by Curators or Collection Managers and will follow the guidelines of individual collections. Researchers and interested parties must contact the respective UMNH Curator or Collection Manager in order to schedule an appointment to study a specific object or specimen from the collections. Requests for access to collection objects and specimens will be considered by the appropriate Curator and Collections Manager taking into consideration risk to objects or specimens, resources available for supervision and research goals. Access to collections storage areas shall only be under the supervision of collections personnel or, in the case of contractors or inspectors, the Facilities Manager.

UMNH policy, guided by state and federal law, allows for curatorial discretion to restrict access to sensitive data such as site, locality, donor, valuation and cultural information. Reposited collections and their associated records may be safeguarded by further restrictions placed by the public land agency. In cases where a Curator needs greater clarification, they may contact the public land management agency. Curators, Collection Managers and the Registrar will take all reasonable steps to ensure that this sensitive information is safeguarded.

Outgoing Loans
For research, exhibitions, education, or other stated purpose, the UMNH will agree to arrangements with other like institutions for the loan of UMNH permanent collection objects or specimens. An Outgoing Loan Agreement will accompany loans originating from the UMNH and signed by both responsible parties. A General Facility Report will be required from the borrowing institution if the object or specimen is loaned for exhibition. Loans from UMNH will be made for a period of one year, with the option of renewal at the discretion of the appropriate Curator or Collection Manager but are non-transferable without written authorization from Curator or Collection Manager. Collection objects or specimens will not be loaned to individuals. If the loan is for research purposes, results of analyses (including publications, reports, images, GenBank number, digital data such as CT scans etc.) must be forwarded to the Museum and remaining materials, not consumed during analysis in the case of destructive studies, will be returned to division Curator or Collection Managers upon conclusion of the study.

Appendix D
Conservation/Archival Supply Companies

Conservation Resources
800-634-6932
www.conservationresources.com

Gaylord Bros. (Demco)
Syracuse, NY
800-448-6160
www.gaylord.com

Hollinger Metal Edge, Inc.
Commerce, CA
800-862-2228 or
Fredericksburg, VA
800-634-0491
http://www.hollingermetaledge.com

Light Impressions
1-800-975-6429
www.lightimpressionsdirect.com

Print File, Inc.
1-800-508-8539
www.printfile.com

Talas
Brooklyn, NY
212-219-0770
talasonline.com

University Products
Holyoke, MA
800-628-1912
www.universityproducts.com

ULINE
12575 Uline Drive
Pleasant Prairie, WI 53158
1-800-295-5510
http://www.uline.com/

Appendix E
Numbering Objects in the Archaeological Reposited Collections at UMNH

Goal: Each object must be labeled with a unique identifying number to assist in accurate record keeping and retrieval of objects upon request.

Introduction: A unique catalog number needs to be applied to every object. They will have a tripartite number. The first number is the accession number (number received from the Registrar—it should have the format UMNH.A.year.number. The second number is the unique identifying number assigned the object in the field or lab before it comes to the museum. It must start with an identifying letter, such as FS, FN, OB then the number. If it was assigned in the field as a group number, then you can give it a period, then another number as you give each number its unique identifying number. This would look like: FS81.5--This is an object given the field assigned group number of 81, and is the 5th object in that group. If it is the only object assigned to that number, then it would look like FS81. The third line of the number must be the site from which it was retrieved. We use the Smithsonian Trinomial numbering system, so if found in Utah, the first part of the number would be 42, the second part of the number is the assigned letter abbreviation for the county in which the site is found, for example KA for Kane County, then a number for that site (assigned by Utah State Antiquities Department).

Example:
UMNH.A.2016.4
FS81.5
42KA208

Procedure: We label objects in order to best track them. The ability to track the object must be balanced with the need to preserve the object.
Labels must be:

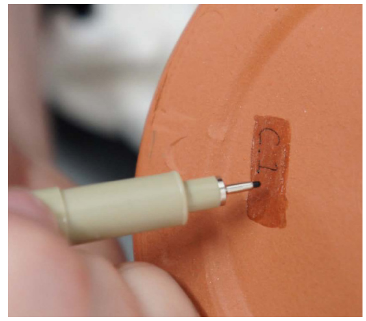
- reversible
- archival
- neat and precise

When applying a label, first apply a barrier coat. This will allow the label to be removed if necessary.
The label should be applied in an inconspicuous place. When possible, do not place labels in areas visible when the object is on display, on worked edges, or where the label could wear off. The label should be as small as possible while still being legible.

Applying the number: Hand Numbering

	Light Surface	**Dark Surface**
Base Coat	Clear coat of B72 (acetone base)	Clear Coat of B72, then white acrylic paint if using black ink
Ink	Black	Black, White
Top Coat	Clear coat of B67 (Naptha base), or Clear coat of B72 Acetone base, when ink is completely dry	Clear coat of B67 (Naptha base), or Clear coat of B72 Acetone base, when ink is completely dry

1. **Hand written labels:**
   Use a labelling pen: A quill pen, mechanical pen, or an archival ink pen such as Pigma® Micron®, with a fine point that can be used to write on the clear coat of B72. The liquid ink should be acid-free, archival, permanent ink. If you make a mistake while hand numbering an object, simply use a small Q-tip dipped in Acetone to wipe off the number, wait for it to dry, reapply the base coat, and then continue labeling. Apply the clear base coat, allow to dry thoroughly (24 hours best). Write the object number clearly, allow to dry. Apply final top coat.



2. **Printed paper labels adhered to the object**

Labels must be printed using a laser printer or xerographic process. Paper must be high-quality with little to no lignin or optical brighteners, 25% cotton rag content is suggested, however the paper should be relatively thin for best results. They are then adhered to the object using B72 in an acetone base, 25% - 50% solution. Labels can be printed at 4pt- 10pt in order to create a legible, printed label for a particular object. Cut the labels to the size needed. Apply a base coat of B72, dip the label into the B72, then press the label onto the object so that it firmly molds to the objects contours and adheres to the base coat of B72. Brush another coat of B72 over the label to completely adhere the label to the object.

B72 in an acetone base, and B67 in a naptha base can be purchased premixed from Gaylord. However it is also relatively easy to prepare your own solution. B72 can be purchased in bulk, and then prepared in an acetone base by weight.

3. **Mixing Paraloid (or Acryloid) B72, 20% in acetone (by weight)**

<u>Supplies needed</u>: B72, cheesecloth, glass container with lid, water, acetone, 100mL beaker, permanent marker, scale

a. In a glass container with a sealable lid, pour in 100 ml of water, mark the height of the water on the outside of the glass container with a permanent marker. Pour out the water.
b. Weigh out 20 grams of B72 granules, place in the bottom of the glass container. (You can put the B72 granules in the center of a small square of cheesecloth, tie it up into a ball, and then suspend the small bag in the glass container).
c. Pour acetone into the glass container up to the 100mL line you marked.
d. Seal the container and wait for the granules to dissolve. (If you didn't use the cheesecloth, you will need to periodically shake the container until the B72 dissolves).
e. Keep the container sealed. You can pour out smaller amounts into a more convenient size (glass fingernail polish bottles work great).

Appendix F
Definitions

Accession
(1) [noun] An object or specimen that has been accepted into the Museum's collections.
(2) [verb] The formal process used to accept and record an object or specimen into the Museum's collections.
Accessions Committee
The chief curator, division curators, registrar and ad hoc members from appropriate academic disciplines as necessary. The committee makes recommendations and approves proposed multi-division acquisitions, deaccessions and long-term Museum collections commitments.
Accession number
The unique identification number assigned to a group of objects or specimens entering the Museum's permanent or reposited collection.
Acquisition
An object or specimen brought into the Museum for anticipated placement in the permanent or reposited collections or for educational utilization.
Catalog
(1) [noun] A collection of records that classifies and describes objects or specimens in the Museum's collections
(2) [verb] The act of creating a record that classifies and describes an object or specimen in the Museum's collections
Collections Management
Practices and procedures that prescribe the prudent acquisition, care, display, documentation, loan, preservation, security, disposal of, and accountability for, collection objects and specimens.
Deaccession
(1) [noun] An object or specimen that has been permanently removed from the Museum's collections.
(2) [verb] The formal process used to permanently remove an object or specimen from the Museum's collections.
Deed of Gift
A mechanism of conveyance or form that is signed and dated by a donor, and countersigned and dated by the authorized museum employee (i.e. registrar, division curators, etc.) which transfers legal title of a donated object or specimen to the Museum.
Disposal
The physical act of removing a deaccessioned object from the Museum's collections.
Donation/Gift
Something voluntarily transferred without compensation by an individual or organization to the Museum. Please note that collections to be transferred to the museum will be assessed the same fees as reposited collections.
Incoming Loan
Object(s) or specimen(s) placed in the temporary custody of the Museum (not involving change of ownership) for exhibition, research, or acquisition approval.
Inventory
The act of physically locating objects or specimens for which the Museum is responsible and comparing them with documentation records.
Loan Agreement
A form used between a lender and a borrower that identifies the lender, specifies the item(s) to be lent, and outlines the conditions of the loan and the respective responsibilities of the lender and borrower.
Loan Number
The unique identification number assigned to an incoming loan upon receipt.

Appendix F
Definitions (continued)

Outgoing Loan
An object in the Museum's collection, lent to a borrowing institution in care of an individual (not involving change of ownership) for research or exhibition.
Preventive conservation
Planned care of an object or specimen and its environment to mitigate deterioration, destruction, or neglect.
Provenience
The origin and source of an object or specimen (generally for natural history items).
Purchase
The act of obtaining ownership of an object or specimen through the transfer of money.
Record
The documents and information pertaining to the receipt, acquisition, management, and disposition of an object or specimen in the museum's custody.
Repatriation
The return of human remains or cultural objects on request from the permanent collection to the appropriate representative tribe with a documented connection to the materials. The materials may be retained by the tribe or reburied at their discretion.
Rights & Reproduction Agreement
A form to be completed and signed by an applicant for the purchase and/or use of photographic images of objects or specimens in the Museum's collection and/or for the permission to reproduce such images in a publication or other format. The form records information on the applicant and the intended use of the photographic image, and provides rules governing rights and reproductions issues.
Risk Management
A program of practices and procedures to control losses and minimize damage to objects for which the museum is responsible. The University of Utah Risk Management oversees all insurance held for the Museum.
Repository
UMNH is the authorized repository of archaeological and paleontology objects and specimens for the State of Utah. UMNH stores, curates and oversees the reposited collections with the understanding that transfer of title does not occur.
Title
The legal right to possess an object or specimen. Title to the collections is held by the Utah Museum of Natural History. Possessing "good title" to an object or specimen is understood to mean that the object or specimen is free of all liens, encumbrances, and claims of any kind, whether from the United States or any other country.
Transfer
The conveyance of ownership of an object or specimen from one entity to another.