# **Artifact Intake Procedures**

• In the Field

• Field Specimens

- Photograph Object
  - Place artifact on flat surface
  - Place appropriate scale (or both) under or beside artifact
  - Write on bag
    - Site #
      - Project #
    - Artifact name
    - Material
    - o Provenience
    - o Date
    - o Monitor Name
    - Any other appropriate information
  - Photograph artifact with bag showing information
- Complete Individual Artifact Record
  - Make sure all applicable fields are completed
  - Fill out Comments Page if necessary
  - Make sure Photograph # is recorded on the Artifact Record and Photo Log
  - Comments Page Examples

0

- Projectile Points:
  - Cottonwood triangle
  - Desert side notched
  - Elko eared
  - Corner notched
- Stem point.
- Flaked Stone Tools
  - Modified edges, are there flake scars along the edges
  - Does the tool show use wear
- Cores

0

- Number of negative flake scars
- Core Tool
  - Type of modification: i.e., battering, crushing along the margins
- o Pottery
  - Designs, painted or etched
- o Mano
  - Pecked shaped shoulders
  - Pecking on the face indicating being used as an anvil
  - Crushed margins indicating the possible use as a hammerstone

#### o Hammerstone

Flake scars indicating that may have been a core first

- At the Office
  - Place Individual Artifact Record with artifact in bag and place in plastic bin for the applicable project
  - Complete an inventory list of artifacts found that day

#### After the Field: Processing Artifacts and Samples

All artifacts undergo seven processing steps: (1) accessioning; (2) assessment; (3) conservation treatment; (4) cleaning; (5) cataloging; (6) packaging; and (7) record keeping. These are the basic foundations of good collections

Procedures	Comments
Accession collection	Prior to fieldwork obtain agreement to curate and, if necessary, conserve, the anticipated collection at a repository even though accessioning the collection itself occurs after the collection is physically transferred to a repository for long-term care
Assess collection	Segregate specimens that require special handling e.g., for conservation treatment, submission for analytical testing, Do Not Clean , etc.
Perform conservation treatments	Minimal conservation treatments, such as construction of supports or padding, should be performed for fragile specimens. These treatments should provide temporary stability so that a specimen can be transported to a professional conservator for consolidation, repair, or specialized cleaning.
Clean objects as necessary	Apply appropriate cleaning methods to specific material classes of objects.
Catalog and label specimens	Sort specimens by material class within each provenience; assign catalog numbers to individual objects and/or lots; label specimens; enter descriptive data into catalog.
Package specimens	Place specimens in artifact and storage containers that are appropriate for the material and for frequency of access (immediate or long-term storage); prepare contents lists for each box and an overall listing of the containers in a collection.
Record keeping	Submit at least one acid-free hard copy of the catalog (as well as disk(s) if in electronic format) to the repository as part of the Associated Documentation.

#### Basic Steps in Processing Archaeological Materials

#### Accessioning

A collection may consist of a single object or document, or many objects and documents. The collection may derive from a single site, or from multiple sites. Decisions on how collections are defined and accessioned are the responsibility of the repository.

Accession numbers are repository-specific. BVR will use year/collection bipartite numbers (the year is used as a frefix, and is followed by a sequential number representing each new accession, i.e., 2015.1 refers to the 1<sup>st</sup> collection accessioned in 2015. The accession number will be used as the prefix for the specimen number that is assigned to each object, e.g., 2015.1.5 designates the fifth specimen in the first collection accessioned in 2015 (see Cataloging below).

The purpose of the accession number is to match an object or collection with the original documentation that is maintained in an accession record. The accession record typically consists of the accession number, the date the object or collection was accessioned, the nature of the accessioned materials, acquisition (e.g., gift, purchase, excavation), the source (e.g., who donated the object), provenience (geographic or cultural origin, maker, etc.), a brief description of the

accessioned material, the condition, value, if applicable, and the staff member who accessioned the material. The accession record documents how the collection was made and how it came to be curated at a given repository.

The accession record is the central location of information concerning a collection's previous history, how the repository acquired it, and any conditions attached to the use of the collection. It is also the place where notes concerning objects within the collection can be maintained or cross-referenced with other repository records, such as conservation treatment records, loan documents, photograph collections, citations of published references that include objects from the collection, etc.

#### Assessment

Two objectives are addressed during the assessment of the collections. First, the inventory list submitted with the collection is compared to the boxes/specimens present to note any discrepancies and take remedial action. Second, individual specimens are examined by the curator, registrar, or researcher, in conjunction with a conservator, to segregate those that:

- 1. Require some type of immediate stabilization before they can be further processed
- 2. Need special cleaning treatments
- 3. Need no cleaning
- 4. Will be submitted for analytical testing
- 5. Will be set aside as unprocessed samples

As specimens are segregated or removed from the collection for special processing, care must be taken to ensure that all provenience data remain with the objects. These objects should receive specimen numbers immediately (see Cataloging below) so that their location and status can be tracked as they undergo special conservation treatment or analysis. Once these specimens have rejoined the collection or have been consumed during analytical tests, the collection catalog can be updated for each specimen to record the specific conservation treatments applied, the analytical results, or the specimen destruction during analysis.

#### **Conservation Treatment**

Conservation treatments provided at this step in the processing should be restricted to minimal efforts designed to stabilize objects sufficiently so that they can be handled for cataloging and analysis. For many objects that require minimal stabilization, this will consist of the construction of a special acid-free support or box for the object (see discussion of preservation characteristics by material class). Any attempts to mend or consolidate the object or apply other chemical treatments should be referred to a conservator. Even minor conservation treatments should be documented including the materials and methods used should be recorded in the catalog for each affected specimen.

Objects that have been stabilized still require special handling and should be marked as such. By placing objects in boxes or supports, it becomes possible to continue processing the object by handling the container rather than the object. Again, care should be taken to ensure that the provenience data accompany the object at all times.

#### Cleaning

Artifacts are cleaned in order to permit analysis of the original surface and features of an object, to facilitate the application of a specimen number to the object, and to remove substances that might otherwise hasten the deterioration of an object. In general, cleaning should be kept to a minimum to reduce the possibility of destroying fragile surface features of an object such as impressions or decorations, and to prevent compromise or loss of use-related evidence such as residues, polish, and scratches. A conservator should undertake professional cleaning of an object intended for display.

Artifacts can be cleaned by dry, wet, chemical, or ultrasonic methods. The entire artifact may be cleaned or only the specific area to which the specimen number will be applied regardless of which cleaning process is used, the conservation treatments should be halted immediately if any damage to the artifact is detected. Provenience information should be kept with the specimen at all times. Residues produced during the cleaning (e.g., pollen washes or DNA samples) may be retained and added to the catalog, noting the link between the original specimen and the residue.

Dry cleaning can take several forms including dry brushing or dry vacuuming. Dry brushing involves using a soft-bristled brush to remove the surficial soil from an artifact. Consolidated soils should be removed by a conservator. Dry vacuuming is particularly useful in cleaning porous objects. The vacuum should have low-powered suction and a small aperture nozzle. A rigid nylon or polyester screen may be attached over the nozzle to further reduce the suction and prevent damage to particularly fragile objects. Vacuums suitable for these tasks can be obtained from conservation suppliers or from medical/dental equipment suppliers.

Wet cleaning with water should never be used for artifacts that are unstable or contain residues that may be useful for chemical analyses. Examples of fragile or unstable materials include organics such as bone, shell, hides, vegetative remains, either processed (e.g., basketry and textiles) or unprocessed, low-fired earthenware ceramics or ceramics with flaking or fugitive decorative surfaces, and metal objects. Residues found on ceramics, chipped stone, and other artifacts can be useful for phytolith, blood serum, radiocarbon, elemental analysis, macrofossil identification, DNA analysis, etc.

Wet cleaning should be restricted to stable artifacts such as ceramics fired at high temperature, glass, and stone. Artifacts should be cleaned in a tub or wash basin rather than under running water to prevent accidental loss down the drain. Only one artifact at a time should be washed. Stone artifacts and debitage can be cleaned by placing specimens in a screen or mesh bag and gently swishing the bag back and forth in the wash basin.

Ideally, wet cleaned artifacts should be air dried slowly and evenly. Under no circumstances should heat, either direct sunlight or a drying oven, be employed to dry the artifacts. Trays with raised, non-metal screen bottoms should be used to air dry the artifacts or artifacts can be placed on absorbent toweling and turned over to ensure thorough drying. If paper is used to dry artifacts, non-acidic sheets or rolls of paper should be used. Newspaper should not be used because of its acid content.

Ultrasonic cleaning can be helpful in loosening stubborn deposits of soil or oxidation. Ultrasonic waves are sent through water in which the artifact is immersed to shake loose adhering dirt. This technique is restricted to stable objects that can withstand immersion and that fit within the ultrasonic cleaner. For example, ceramics and glass with mircofractures may break apart from high energy waves.

Although the ultrasonic cleaning process was not originally developed for archaeological purposes, it has proven to be effective at cleaning many items such as debitage, projectile points, and sherds. Approximately five minutes or less is needed to strip off stubborn oxidation deposits from artifacts, although more time may be necessary for some artifacts. The progress of the conservation treatment should be monitored regularly. When no further improvement is apparent, remove the artifact, rinse with water, and let dry thoroughly. Again, record in the catalog which objects were cleaned with this process.

Spot cleaning may be used in instances where it is preferable to clean only the spot on the artifact where the specimen number will be placed. Use a moistened soft-cotton tipped stick to wash an area the size of the intended label. Let the artifact dry completely before the specimen number is applied.

Chemical cleaning should be performed or supervised by a professional conservator. Chemical cleaning may be necessary to remove encrustations or the corrosion layer on artifacts, particularly on metals, but also on basketry, bone, or ceramics. The chemicals used are usually acids, bases, chelating agents, or sometimes other depending on the artifact being treated. These chemicals can cause irreversible damage to the artifact if not applied correctly. Also, the use of chemicals may require certain safety precautions and protective clothing. For example, some chemical cleaning should only be performed under a fume hood.

After the artifact is gently dry brushed, it may be immersed in water to wet it thoroughly, then suspended in the chemical solution for specified periods of time, rinsed thoroughly in changes of distilled or deionized water, and allowed to dry slowly. Artifacts that are chemically cleaned should be identified in the catalog, noting the chemical solution used, the time immersed, and the methods used to rinse and dry the object (Figure 3).

Material Class	Recommended Cleaning Method
Bone	Dry brush
Organics (macrofossils, wood, etc.)	Do not clean. If absolutely necessary, dry brush softly or use low powered vacuum through a screen. Retain the soil for possible constituent analysis. Consult a conservator.
Ceramics	Do not clean ceramics that have use residues. Spot clean area to be labeled. If complete cleaning is desired, stable ceramics can be washed in water, or swabbed (or surface cleaned) with damp cotton swabs. If washing is necessary, dry thoroughly before labeling or packing. Unstable or crackled ceramics may require consolidation before processing. Consult a conservator. For ceramics with salt encrustations, consult a conservator.
Glass	Dry brush. Spot clean as necessary. Do not wash unstable, flaking glass. If washing is necessary, dry thoroughly before labeling or packing. Glass with thin films or iridescent glass corrosion should not be scrubbed or aggressively cleaned. Allow to dry.
Leather	Use preventative conservation including optimal storage conditions with a minimum of handling. Consult a conservator.
Chipped stone	Do not clean chipped stone if use-wear studies are to be performed or if there is a possibility that mastic, cordage impressions or other residues are present. Determine what portion of lot samples requires washing to prepare them for analysis. Wash tools and flakes in water; use gentle brush to loosen soil if necessary, or ultrasonic cleaning.
Metals-ferrous non-ferrous	Do not wash. Do not use heat or commercial polishes or dips. DO not remove corrosion crusts. Consult a conservator.

Paper

Samples

Do not wash. Consult a conservator.

Decide what proportion of samples will be processed. Retain a portion of unprocessed for future analyses. Process as needed.

Bulk shell soil flotation, heavy/light fractions

Samples for Special Analysis		
(e.g., archaeomagnetic, C14, hydration, residue analyses, etc.)	phytolith,	Do not wash. Consult analytical laboratory for required processing techniques.
Shell		Do not wash. Dry brush, after specimen has been checked for possible residues (e.g., mastic, cordage impressions, food, paint) May need consolidation before processing. Consult a conservator.
Textiles basketry		Do not wash or dry brush. Low powered vacuuming through a screen. Do not use home remedies for fabric cleaning, e.g., washing, spraying, steaming, lubricating, or waxing. May need special support and packaging. Consult a conservator.

## **Cataloging**

Cataloging is the process of assigning a unique identifying number to an object and recording a description of the object, its dimensions, and provenience data. The object may also be photographed as part of its documentation. For the purposes of these protocols, the actual placement of the unique number onto the object is the next step in processing.

Specimen number (sometimes also known as catalog number) is the unique identifier that is assigned to each object within a collection during the cataloging process. It provides the link between the object and its associated documentation, including the accession record and any other information pertinent to the collection or to the specific object.

A catalog is the listing of all specimen numbers relevant to a single collection. The catalog may be electronic and/or in a paper format. It lists the number assigned to each object, a physical description of the object, often a typological assignment, and any specific provenience information for each object. Catalogs can also be used to note or cross-reference other records documenting changes in an artifact s status or condition i.e., they can cite original condition, conservation treatments, use of an object for destructive analysis, changes in condition, etc.

Some objects will undergo cataloging more than once. Some may be assigned temporary specimen numbers (sometimes referred to as catalog numbers) either in the field or during analysis, but then are assigned a final specimen number by the repository where the collection is ultimately stored. The final catalog should cross-reference any previous specimen numbers assigned to an object, and it is recommended that previous specimen numbers not be removed from an object when adding the final specimen number.

A specimen number may be assigned to an individual object or to a group of similar objects collected from a single provenience. The latter strategy is used when cataloging faunal remains, debitage, glass fragments, or other fragmentary, nondiagnostic remains from a single provenience. Generally, if the object will be analyzed as a single specimen, it should be cataloged individually as well. Materials that are analyzed in bulk, such as shell or chipped stone, can be assigned a single lot number. At a minimum, a catalog should list the following classes of information for each object (Figure 4).

No matter how the catalog data fields are organized, all data must be recorded in a consistent and uniform manner, particularly if catalog information is entered into an electronic data management system. Abbreviations should be avoided whenever possible, and if used, an abbreviation key must be kept as part of the catalog.

	Sample Catalog Data
Data Field	Example
Accession number	97-113
Specimen number	97-113-4531
Object description	Projectile Point
Material class	chipped stone; obsidian; Topaz Mountain
Form	Side-notched, basal fragment
Typological assignment	Desert side-notch
Analyst and date analyzed	William Henry Holmes 9/5/89
Quantity	1
Measurements	Length: N/A Width: 15 mm Thickness: 5 mm (note any dimensions that are fragmentary)
Weight (when appropriate)	1.2 g
Provenience: geographic location	26Wp2886
Specific location	Unit 14; 45 cm East, 63 cm South; 35 cm below surface
Associated features/artifacts	Hearth feature #4; adjacent to 97-113-4530.
Chronological Data	Obsidian hydration Rim: 3 microns
Collector	D.H. Thomas
Date Collected	6/12/67
Comments on condition, form, conservation treatment, etc.	Fracture is not new.

# Labeling Artifacts

Once an artifact has been assigned a specimen number, a decision must be made on how best to associate the number with the object, whether to label the object directly or indirectly. Conservation principles dictate that any conservation treatment applied to an object, including the attachment of the identifying specimen number, should be noninvasive and reversible. Labels should be legible, neat, and unobtrusive. Extraneous writing on an object should be avoided.

#### **Packaging Artifacts for Storage**

Artifacts stored loose within a drawer are subject to much more damage than those that are placed inside some type of protective artifact container, a bag, box, or special support. These artifact containers, in turn, are often placed within a storage container, e.g., drawers for easy access to type collections or boxes on shelving for long-term curation. The intended use of the

specimens and specimen condition will affect how each should be packaged after cataloging. In addition to protecting the artifact, all packaging should be labeled clearly to facilitate access to specific specimens within a collection and to reduce excessive handling of the object.

#### **Artifact Container Guidelines**

Determining which container is suitable is influenced by the following.

1. Determine the anticipated use of the material. Determine the frequency to access for the artifact. Should it be stored with type collections materials that are frequently used and therefore placed in drawers or stored in archival boxes that are located on shelving?

2. Segregate and store objects by their material class. When placing specimens or samples in artifact containers, objects from only one material class should be placed in the artifact container. Each material class specifically has an optimal storage environment. This environment is easier to create if similar materials are stored together and can be segregated from the rest of the collection if necessary. For example, all soil samples should be stored under similar conditions; however, they can be arranged by provenience (by site number, excavation unit, level, etc.) within a soil sample storage area. The segregation by material class should extend to the final placement of artifact containers in storage containers. Fragile or lightweight materials should be kept separate from rugged, heavy artifacts.

3. Select the type and size of containerappropriate for the kind and size of the object taking into consideration the frequency that the object will be used.

Polyethylene resealing (Ziploc<sup>n</sup>) bags. These have become the popular container for most small to medium-sized artifacts and for larger samples of a single material class such as faunal remains, soil samples, etc. They are economical, easy to handle, lightweight and compact, and can be directly labeled. Nevertheless, there are some precautions that should be exercised if polyethylene bags are used.

a. Select the size bag that is appropriate for the object. Do not force an object into a bag. Instead, select the next larger size. Do not overfill a bag simply to maintain consistency of bag size when processing a collection.

b. Select the most appropriate bag thickness. At a minimum, use bags with a thickness of 4mil or greater. These provide a measure of cushioning of the artifact and are stronger than thinner bags. Thicker bags should be used for heavier objects.

c. Ventilate the bag for hygroscopic materials. Ventilation is recommended only for hygroscopic materials. Small holes should be placed at the top of the bag, prior to placing the object inside. The holes will permit air circulation and thereby prevent mold or other organic fungi from developing inside a sealed bag. Although all polyethylene bags experience air exchanges over a period of time and none is airtight. Naturally, the holes should be smaller than the diameter of the contents. Generally, a hole punch can be used for most objects, although bamboo skewers are useful for making fine holes.

d. Add padding when necessary. Acid-free tissue, polyethylene foam sheets may be used to provide an extra measure of cushioning for objects or to cover a sharp object that might otherwise tear the artifact container.

e. Do not store fragile objects in a polyethylene bag. Organic remains and fragile objects should be placed in rigid wall containers (see below).

f. Purchase polyethylene from reputable vendor. There are many grades of polyethylene. Some polyethylene sheeting is produced from recycled scraps of polyethylene with unknown formulations and composition. All contain plasticizers and anti-oxidizing agents that are susceptible to leaching and degradation. If the bags are purchased from a supplier of archival materials, there is likely to be greater attention to consistent quality and to backing the product.

Polypropylene rigid wall containers. More and more containers are being produced in a range of standard sizes from polypropylene film vials to large lidded boxes. These can be used as artifact containers for heavy, bulky objects, and they can be used as the basis for supporting a fragile object needing extra protection. Follow the same principles outlined above for polyethylene bags.

Acid-free boxes. Although these are more expensive, archival acid-free boxes come in a variety of styles, sizes, and strengths, and they should not require repackaging as frequently as polyethylene bags. It is recommended that boxes with telescoping lids be used rather than flap-fold lids. Telescoping lids allow easier access and prevent the container from becoming damaged with use as often happens with flap lids. Custom designed boxes can also be made for unusual shaped or sized artifacts. These can be hand-built using acid-free poster board adjoined with linen tape or hot melt adhesive. Care must be taken to ensure that the box strength is sufficient to support the weight of the object without any flexure of the container walls. Some vendors will make large lots of odd-sized boxes as well. Metal containers. The advantages of metal are its rigidity, strength, and potential to provide sterile storage for an artifact or sample. The disadvantage of some metals is that they are susceptible to oxidation that in turn is exacerbated by the presence of moisture and/or heat, particularly if the container has a tight-fitting lid. Some metals are susceptible to chemical interactions with other metals.

Carved polyethylene foam. Artifacts stored in drawers can also be protected by carving object specific shapes in a block of polyethylene foam (e.g., Ethafoam<sup>s</sup>)that has been cut to fit the drawer. Each object space can be labeled with the specimen number or any other special information regarding the object.

Unacceptable artifact containers. These include, but are not limited to, brown paper bags, sandwich baggies, lightweight food storage/freezer bags, non-polypropylene plastics, film vials or pill bottles, or glass containers for which no special provision has been made to store them securely to prevent breakage. Artifact containers should not be closed with tape, twist ties, rubber bands, string, staples, or heat sealing.

4. Construct special packaging or support when necessary, and label it as well.

As mentioned above, some containers may need to be custom-designed to fit odd-sized objects. They can also be constructed to provide platforms for custom supports of fragile or broken objects that require special support in specific areas or to make portions of these objects

visible without handling the object itself. Use archival quality materials in constructing the support and consult a conservator if in doubt as to which portions of the object are strongest or most fragile and require special consideration. Labeling the packaging/ support will also reduce the amount of handling required to verify the object s specimen number.

5. Maintain provenience data at all times. Label all artifact containers so that the contents can always be associated again should they become separated. All artifact containers should be labeled directly with permanent, indelible ink, and they should have an acid-free label placed inside the container.

## **Storage Container Guidelines**

After the artifact has been placed comfortably and securely in its artifact container, the artifact container is usually placed inside a storage container, e.g., inside a larger polyethylene bag, a box, or a storage unit drawer. Many of the same principles listed for the artifact container apply here as well.

1. Determine the anticipated use of the material. Determine the frequency of access for the storage container. Should the container be easily opened or can the group of artifacts stored inside be placed in a container that is designed for long-term preservation.

2. Segregate and store objects by their material class. Heavy items such as brick, daub, groundstone, and fire cracked rock, should be stored separately from lighter artifacts to prevent damage caused by shifting when boxes are moved from the shelves or when drawers are opened or closed in storage units. Use archival quality padding or dividers to help stabilize heavy objects to prevent movement. Ideally, artifact containers should not be stacked atop each other in a box or drawer, but placed in a single layer only. If this is not possible, then the heaviest items should be placed in the box first with lighter items on top of them, even if this means that the artifacts are no longer in sequential order. Each storage container will have a contents list that will assist in locating specific artifacts within that container.

3. Select the type and size of container that is appropriate for the kind and size of the object. The storage containers must not be over-packed, distorted by the contents, or made too heavy to handle easily. The maximum weight of a container should be between 20 and 30 pounds. Weights in excess of this range become unsafe to handle.

4. Construct special packaging or support when necessary, and label it as well. Artifacts should not wrapped in packaging material so that the item's identity and size cannot be determined unless it is unwrapped. Instead, lay the artifact on a nest of acid-free tissue, then cover it with a protective layer of tissue that can be lifted off without handling the artifact. Segregate and cushion large heavy items that may cause damage if they shift position.

5. Maintain provenience data at all times. The exterior of the storage container should list the provenience and the general contents or range of artifacts contained inside. Inside the storage container, place a packing list or box inventory printed on acid-free paper. This list should contain the specific specimen numbers stored in the container. It will facilitate locating and replacing objects in their correct storage container. The storage container can be labeled directly with pencil or indelible ink or with an acid-free paper label placed inside a sleeve on the exterior of the box or shelf.

#### **Record Keeping**

Throughout the procedures discussed above, the importance of documenting every action affecting an individual specimen and/or on the collection as a whole has been emphasized. Each repository will undoubtedly have its own procedures and formats for documenting these data on specific forms or by direct entry into an electronic collections management or other centralized tracking system. Museums often refer to these data as Administrative Records. The format in which they are maintained is not as critical as the fact that they have been recorded and are accessible.

#### **Curation History**

The curation history of a collection informs future users of the collection not only about the original context or provenience from which an object came, but also notes the original condition and changes to the condition, conservation treatments performed and the specific chemical formulations used, the availability of photographs or analyses, the results of destructive analyses, and even the date an object was noted as broken or missing. It establishes and assists in maintaining intellectual control over the collection.

The curation history assists future users of the collection in identifying specimens suitable for specific research questions, for interpretation, or for educational uses. It can assist curators and conservators in monitoring changes in collection condition and enables informed choices for future restorations or conservation treatments. It can even aid repositories in identifying curatorial practices that are advantageous, versus those that are deleterious for the long-term curation of collections, by documenting specific conservation treatments and practices.

The curation history should be collection specific. Curation histories should be active documents that are routinely updated. As a matter of course, there should be a scheduled review, e.g., every two years, to ensure that they are up-to-date and that linkages between data management systems are operating in a consistent manner to track curation data.

Curation History of a Collection		
Procedures	Information Needed	
Collection Acquisition	<ol> <li>Date(s) that the collection was made, by whom, for what purpose, and other relevant detailsregarding the origin of the collection, such as a general description of the excavation/collection techniques.</li> </ol>	Ť
	<ol><li>Date that the collection was accepted by (each) repository and any conditions pertinent to theownership, access, or curation of the collection. Record the name of the individual that accessioned the collection and the Accession Number.</li></ol>	
Processing Techniques	<ol> <li>Date collection was processed and by whom.</li> <li>General procedures to clean or treat the collection (identified by material class).</li> <li>Specific procedures to treat individual specimens (record each individually).</li> <li>Products and/or formulations used to process the collection.</li> </ol>	
Collection Inventory	<ol> <li>Field inventory (if present), and how produced.</li> <li>Final catalog (note specimens that received conservation treatments, analysis, or were lost ordamaged in transit or elsewhere) and how produced.</li> <li>Periodic inventories by repository (note any changes from previous inventory).</li> </ol>	

Storage Conditions	<ol> <li>General conditions for storing each material class in the collection.</li> <li>Special storage conditions for specific specimens.</li> <li>Type of pest management system used, name of inspector, and frequency of inspections; note anyconservation treatments made.</li> <li>Record any changes in these procedures as they occur. Add them to the Curation History. Do notremove previous procedures.</li> </ol>
	5. Note any natural or human-induced crises that affect the storage conditions.
Conservation Treatments	1. Record for each specimen treated.
	2. Maintain list of specimens to be monitored for special conditions.
Collection Use	<ol> <li>Record types of use (loans, exhibit, research, etc.) and place copies of any publications, photographs, exhibit catalogs, etc. in the collection file.</li> </ol>
	<ol><li>Note any destructive uses of specimens. Include all documentation including original request foruse, Department of Defense point-of-contact approval, methods used, and results.</li></ol>
	3. Note any restrictions on use (e.g., human remains).

#### With this being said, the primary

goals of our field laboratories are to:

1. Log in all materials as they come in from the field at the end of each day

2. Thoroughly wash and dry all artifacts recovered during the Field School

3. Sort all bulk and unique items by artifact class for each unit and level

4. Count and/or weigh all artifacts and enter this information on unit and level specific catalog forms

5. Fill out artifact tags and place all artifacts in appropriately-sized bags

6. Box all processed materials by site or site area

7. Complete flotation of soil samples collected during the Field School

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Guidelines for Collecting Redundant Archaeological Materials While in the Field

1	Products	leather, glassware, metal). Discard all non-diagnostic fragments.
3	Building Materials	
	Brick	Weigh all; note reconstructable dimensions; retain all with maker s marks and a representative sample of those without maker s marks.
	Coal Weigh a	all; retain predetermined sample. Daub
	Weigh a	all; retain any with impressions
	Glass	Measure thickness of all window glass; retain representative sample of types.
	Lumber	Identify and record sizes present; retain unique or diagnostic specimens.
	Metal	Retain any with diagnostic features; do not collect non-diagnostic fragments.
	Mortar	Retain any specimens with diagnostic features.
	Nails	Identify type and number of each type; retain a representative sample; discard remainder.
	Shingle/Roofing Materials	Weigh all; retain representative sample of material types.
Preh	istoric Materials Sampl	es
	Fire Affected Rock	Weigh all; retain representative sample of rock material types.
	Daub	Weigh all; retain any with impressions significant to interpretation.
	Charcoal	Retain all samples having provenience data; discard any lacking provenience or compromised by contaminants.
	Shell	Weigh all; retain predetermined sample for analysis.
	Wood	Retain a representative sample of wood types.
	Faunal	After analysis, retain representative sample of all identified fauna present, any modified bone, and a predetermined sample (e.g., selected column sample) of unanalyzed faunal remains.
	Botanical	Retain all diagnostic specimens.
	Soil	Retain all floated samples and a representative sample of unprocessed soil.
listo	oric Materials Samples	
)	Faunal Weigh all; reta	in a predetermined sample for analysis and an example (e.g., selected column sample) of unanalyzed faunal remains.
-1	Botanical	Retain all diagnostic specimens.
	Shell	Weigh all; retain predetermined sample.
	Charcoal	Note presence, do not collect any samples.
	Soil	Retain all floated samples and a representative sample of unprocessed soil.

# Washing Artifacts

After obtaining a drying rack, carefully remove all of the artifacts from the field bags. Be sure that no artifacts are caught in the folds of the paper field sack. Next, using

scissors, cut off the entire portion of the bag containing the provenience information and place on your drying rack. Do not overload drying screens. Proveniences may be split between drying screens, but all provenience information and the catalog number must be

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clearly maintained with all artifacts; prepare provenience documentation to go in each drying screen.

Because different types of cleaning techniques are appropriate for different types of artifacts, you will need to determine how you are going to wash each class of items represented. If you are not sure how to best clean an artifact, please consult with your laboratory supervisor for assistance.

In washing, our goal is clean each artifact as completely as possible without

damaging the item. Durable artifacts, such as chipped stone or heat-modified rock, may be cleaned using water and a stiff bristled brush and placed on the drying rack. More fragile items, such as porous bone and some shell, will often require the use of a skewer

stick and a soft bristled toothbrush or paint brush dipped in water. In some cases, you should not attempt to apply water to an artifact. In these situations use only a skewer stick and/or a soft bristled toothbrush or paint brush to remove sediment from the item. If

it is apparent that an artifact will disintegrate with normal cleaning, consult with your laboratory supervisor on how best to clean and stabilize the item.

Small artifacts, generally less than 1 cm in size, may be cleaned by placing these items within a wire colander and thoroughly rinsing. Before placing these small items on a drying rack be sure to check them and make sure they are clean. Investigate all foil packets and vials. Foil packets containing carbon, wood, or soil samples should be left open to dry. Notify your lab director of such packets.

Overall, be diligent during the cleaning process to avoid damage to artifacts and to be sure that artifacts are clean. Artifacts that are not thoroughly cleaned will eventually have to be washed and dried again; this takes extra time and causes delays. When washing artifacts, work with only one provenience at a time. Use extreme care to maintain the correct provenience information. The following provides a number of useful guidelines to abide by when cleaning artifacts:

Use tap water only; do not use soap.

Do not allow bone, shell, pottery, daub, or limestone to soak in water.

□ Do not clean radiocarbon samples (usually charcoal) or soil samples. They need to completely dry before being sealed for storage. Lay them out with their

complete provenience information. Drape with mesh to prevent cross23

contamination. Do not place paper labels directly with radiocarbon samples.

**Shell**: Avoid getting wet at all. Remove as much dirt as possible without damaging the shell. Use a soft toothbrush if necessary.

**Bone**: Clean gently with a soft toothbrush. A bamboo pick may also be very helpful. Do not try to reconstruct bone with white glue. Check with your lab director.

**Pottery**: If it is without cooking residue, wash delicately, without leaving damaging brush marks. Please make certain the pottery is completely clean, including the edges. DO NOT wash pottery with dark, encrusted cooking residue. If you are unsure what cooking residue looks like, ask your lab director.

Groundstone: Dry brushing is the best way to clean ground stone, but you may use water

and gently wash the non-ground surfaces.

Charcoal: Open packet and let dry completely. Do not wash.

**Pipe bowls and stems**: Do not clean the interiors of these items. Thoroughly dry all contents and place in a foil packet.

**Metal artifacts**: Gently wash with water. When washing crushed tin cans, deformed shell

casings or other similar items, be sure to remove all soil from the inside of these items. In some cases it may be necessary to gently pry open these items so that the soil inside can

be thoroughly washed out. Ask your lab director if you have any questions regarding this

procedure.

## Sorting Artifacts

To begin sorting you will need a drying rack containing clean and dry artifacts, a plastic sorting tray, and a Courson Archaeological Research Artifact Sorting and Catalog

Code Key chart. The classes of artifacts typically recovered at prehistoric sites of the region are described in the Artifact Sorting and Catalog Code Key chart. It is crucial that the correct artifact class terminology presented on this chart be used at ALL TIMES when filling out Catalog Forms and Artifact Tags. While not ideal for all situations, the designation of specific terminology for individual artifact classes is necessary to maintain

continuity during analysis and data entry. Otherwise, it is possible to have several different terms used to describe a single class of artifacts in the catalog records and computer databases. For example, the terms scrapers, turtle back scrapers, and guitar 24

pick scrapers, have all been used to refer to distal end scrapers. Likewise, flakes, flint, chips, and chert, are all terms frequently used to describe Debitage.

A simplified guide to artifact sorting is presented below. Here, it is assumed that the wide variety of artifacts typically found in this region has been recovered. In reality, however, this will rarely be the case. As such, if some of the artifacts listed below are not

included in the actual items you are sorting, simply skip that step. As you will see, artifacts recovered will either represent bulk items or unique items. Bulk items refer to artifact types that are cataloged and bagged together by class. These include debitage, burned and unburned unmodified bone, fire-cracked quartzite, unmodified mussel shell, and other burned rock. Unique items, such as projectile points, other formal chipped stone tools, pendants, bone tools, and exotic trade items, should be assigned individual Field Specimen numbers. These items will eventually have their own artifact tag and be individually bagged in an appropriately-sized Ziploc bag.

Carefully empty the contents of the drying rack onto a sorting tray.

A. Sort the artifacts into 4 piles consisting of Stone, Ceramics, Bone (including all tooth enamel), and Everything Else.

B. Take the pile of Ceramics and set aside; it will not be further sorted.

C. Take the pile of bone and sort into two groups consisting of Burned Bone and Unburned Bone. Set aside these materials; they will not be further sorted.

D. Take the pile of Stone and split into groups consisting of Chipped Stone (including Burned Chipped Stone), Groundstone, Battered Stone (i.e., Hammerstones), Heat-Modified Stone, and then all Other Stone.

E. Sort the Chipped Stone into piles consisting of Debitage (including Utilized and Modified flakes), Projectile Points (including Preforms), other Formal Chipped Stone Tools (i.e., scrapers, drills, and bifaces), and Cores. 25

Burned Rock Core **Chipped Stone Tool Projectile Point** Obsidian Debitage Shell Modified Bone **Burned Bone** Bone Category BR COR CST POP OBS DEB SHL MOB BB BON Code All burned rock, except fire cracked quartzite (see below) and chipped stone debitage and tools, are included here. In the Texas panhandle items in this category usually consist largely of burned caliche. Pieces of isotropic material (e.g., Alibates, Ogallala quartzite, obsidian, Edwards chert) bearing negative flake scars and commonly known as cores are separated into this category. Includes all formal chipped stone tools, except projectile points. Formal tools included here are scrapers, drills, and knives. Utilized flakes are not included here (see debitage above). Includes all complete arrow and dart points and fragments of projectile points. If you believe that you may have a projectile point fragment, but are not certain, classify it as a Chipped Stone Tool. Obsidian, an exotic toolstone to the region, is sorted into an individual category. Since this material is easily identifiable by laymen it is the only nonlocal toolstone separated out in the sorting stage of laboratory work. Includes all chipped stone flakes and utilized flakes (see Obsidian below). Formal tools (i.e., projectile points. scrapers, drills, and knives) are separated into the Chipped Stone Tool category. All burned and unburned mussel shell is included in this category. Snail shells, unless modified in some manner. should be discarded. All bivalve and gastropod shells that have been modified into beads or pendants should be cataloged as ornaments (see below). Includes any bone clearly modified into a tool (e.g., awls, hoes, digging sticks, and rasps). Includes all burned faunal remains, excluding shell (see below). Includes all unburned faunal remains, excluding shell (see below). Description Artifact Sorting and Catalog Code Key 26 Other **Special Sample** Daub

Pipe **Sediment Sample** Organics Ornament Ceramics Hammerstone Groundstone Charcoal **Other Rock** Fire Cracked Quartzite Category OTH SPS DAB PIP SOS ORG ORN CER HAM GRS C14 OR

FCQ Code

Catch all category for any other cultural material that does not fit into other categories. Category reserved for all samples collected in the field (e.g., phytolith Sample). Includes all other fired and unfired clay not classified as Ceramics.

Includes all types of smoking pipes.

Category for any type of soil sample collected in the field. Be sure to record the sample size in liters. Include unburned organics. Note: Does not include bone or shell (see above). Note: Very rarely are unburned

organics recovered in open sites of the region.

Includes all ornaments, such as shell, bone, and stone beads and pendants. Most commonly these include Olivella

shell beads, marine shell disc beads, and turquoise or microline beads and pendants.

Includes all ceramic sherds. Do not sort out by sherd type, such as rim and body sherds.

All rock, excluding chipped stone, with evidence of battering.

Includes all rock, other than chipped stone, modified by grinding. This category includes abraders, manos, metates,

and celts. Note: Pipes and ornaments are not included in this category. cataloged as ornaments (see below).

Includes all burned organic samples, excluding bone and shell (see above).

This includes other rock that does not apply to any of the above categories. If the rock is not modified by burning,

flaking, abrasion, or battering, then it should be discarded. If you have any questions ask your lab supervisor!

All quartzite pebbles bearing evidence of burning, usually in the form of fracturing, are included in this category.

These items are separated from other Burned Rock (see above) because Quartzite pebbles were often used as boiling

stones. With repeated heating and cooling quartzite boiling stones frequently shattered.

# Description

# Artifact Sorting and Catalog Code Key

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F. Take the pile of debitage and sort into 2 groups of raw materials consisting of **Obsidian** and **Everything Else**. Set aside all of the sorted **Chipped Stone** materials; they will not be further sorted.

G. Take the pile of **Groundstone** and sort into groups consisting of **Manos**, **Metates**, **Abraders**, and **Unidentifiable Groundstone**. Set aside all of the sorted **Groundstone** materials; they will not be further sorted.

H. Sort the **Heat-Modified Stone** into piles consisting of **Fire-Cracked Quartzite** and All **Other Heat-Modified Rock.** Set aside these materials; they will not be further sorted. Burned chipped stone flakes and tools should not be included here; they should be kept with the chipped stone.

I. Take the remaining items and sort into piles consisting of **Shell** (this should include only mussel shell; we are not collecting snail shells unless they have been modified), **Charcoal**, **Ornaments** (including, shell ornaments), **Pipes**, and **Other** (a catch-all category that includes everything else that is remaining).

J. At this point the sorting should be complete. If you are in doubt as to the identification of any items contact your lab supervisor for help. If you do not know what something is, do not guess, ask for help!

# Filling Out Artifact Catalog Record Forms

Lab personnel will use the following tools for cataloging and filling out artifact tags: a pencil, a catalog form, artifact tags, a sharpie marker, a digital scale or triple beam balance, aluminum foil, Scotch tape, and an assortment of different-sized Ziploc bags. At

the top of the Artifact Catalog Record form record all of the appropriate provenience information using a pencil. Note that you should only use a pencil to fill out Artifact Catalog Record Forms and Artifact Tags. Be sure that the provenience information is correct and matches what is recorded on the field sack and Level or Feature Forms. Record *your* name and *today's* date in the appropriate blanks. Do not enter the names or

the date recorded on the field sack. Taking the artifacts you have just sorted into individual piles, begin cataloging with those categories that have the most numerous

Page of

# ARTIFACT CATALOG RECORD

Site: Area/T.U. #: Northing: Easting: Level:

Catalog #: Name: Date:

# FS # Artifact Description Material Portion Burned Count Weight (g) Comments 29

items to those with the least plentiful artifacts. For prehistoric sites of the region, bone, debitage, and heat-modified stone will often represent the most numerous items recovered.

Bulk items that will be counted, weighed, and assigned a single specimen number include debitage, ceramics (i.e., sherds), shell fragments, sandstone fragments, burned caliche, and heat-fractured boiling stones from the same provenience. Bulk items that should be weighed only (not counted) and assigned a single specimen number include burned and unburned unmodified bone, charred organic material, daub, and burned earth

from the same provenience. Individual items which receive individual specimen numbers

and are weighed include complete and partial bone tools, complete and partial chipped stone projectile points, tools, and cores, groundstone artifacts, hammerstones, complete and partial shell tools, ornaments, utilized hematite, pipes, and any imported material such as southwestern pottery and turquoise.

Starting with the first class of artifacts, such as bulk, unburned bone, assign a "1" in the FS # (i.e., Field Specimen #) column of the form. As you fill out additional lines, continue to assign FS numbers sequentially. If artifacts from a given provenience are so numerous that a second Artifact Catalog Record Form is needed, continue assigning FS numbers in order (i.e., do not start over with FS #1). Under the Artifact Description column write "Bone". In the column labeled Material, record "Bone". Under the column labeled **Portion**, enter a "---". For unique items, such as a projectile point or bifacial knife, you may enter complete, distal, medial, proximal or whatever description is most appropriate here. For ceramics, you may enter either "Body" or "Rim Sherd". Under the Burned column record "No". In the Count column enter a "--". For bone, burned bone, charcoal, and other small, highly-fragmented items that are difficult or very time consuming to count, we will only record weights. All other items will be counted and the frequency recorded in this column. If you have any questions regarding whether or not to count a class of artifact, consult with your lab supervisor. Next, weigh the bone on a digital scale or triple beam balance and record its weight in the Weight column. Note that we are recording weights in grams. Heavier items that exceed the capacity of the digital scale (i.e., 200 g) may be weighed on a triple beam balance scale. Enter any additional information that needs to be recorded in the Comments column. 30

For example, if the item is classified under **Artifact Description** as "Ornament", a more specific description of the item should be provided in the **Comments** column. Also, if the artifact is a mapped item, record its MI # here. Lastly, do not leave any blanks unfilled. If necessary, enter a "—" in a blank.