

Coordinating Office, 2475 N. Hatch Ave., Fayetteville, AR 72704, Phone: (479) 575-3556, Fax: (479) 575-5453

# 3D Imaging and Printing Policy for Artifact Replication

Effective August 30, 2024

# Scope

This policy applies to artifacts in the care of the Arkansas Archeological Survey. It excludes objects in place in situ, e.g., gravestones.

# **Objectives**

## 1. Access and Public Engagement

The Arkansas Archeological Survey (ARAS) will facilitate consultation more meaningfully with descendent communities through interaction with digitized materials.

#### 2. Research

ARAS will facilitate research by providing access to digital files for various research related projects including measurements of objects down to the millimeter, and higher resolution images of surface treatment and decoration. ARAS allows researchers to discern images, words, makersmarks that have been altered by use-wear and chemical processes that happen over time that are not recognizable without processing virtual images.

# 3. Education and Public Engagement

ARAS will ensure that replicated artifacts are accessible for educational and cultural purposes, while respecting any restrictions set by descendant communities. ARAS will provide interpretative materials to contextualize the replicated artifacts, acknowledging the input and knowledge shared by the descendant communities.



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# 4. Documenting and Disseminating Knowledge

ARAS 3D imaging and printing will be used for documentation and dissemination of knowledge following the approval of stakeholders/rightsholders.

#### 5. Consultation and Facilitation Process

ARAS will initiate early and ongoing consultations with descendant communities regarding the intent and scope of artifact replication. ARAS will facilitate dialogue to understand cultural significance, usage, and sensitivities associated with the artifact.

#### 6. Preservation

The primary purpose of 3D imaging and printing at ARAS is to compile digital archives of archeological artifacts for preservation and study while minimizing handling of original items to prevent further damage and/or deterioration.

# Criteria for 3D Imaging

#### 1. Informed Consent and Ownership Rights

ARAS obtains informed consent from descendant communities prior to initiating the replication process. ARAS seeks to clearly define ownership and intellectual property rights, ensuring that descendant communities have a say in how replicated artifacts are used and displayed.

#### 2. Condition

Objects must be stable enough for scanning without causing damage or degradation, recognizing that one of the purposes of scanning is to limit subsequent handling and its attendant risks.

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# 3. Data Storage

ARAS safeguards all digital data obtained during the replication process, respecting confidentiality agreements and restricting access to authorized personnel.

#### **Ethical Considerations**

## 1. Respect and Sensitivity

ARAS acknowledges the cultural significance and sensitivity attached to the objects within descendent communities.

# 2. Repatriation and Ownership

Access to images and/or scans of objects that have been repatriated or are otherwise under the control of tribal partners or other rightsholders is at the discretion of the object's legal owners.

## 3. Legal and Ethical Considerations

ARAS complies with legal requirements, ethical considerations, and consultation with relevant stakeholders/rightsholders, including descendant communities.

# **3D Printing Procedures**

## 1. Printing Standards

ARAS utilizes high-quality 3D printing techniques to produce faithful replicas that maintain the integrity and appearance of the original artifact.



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# **Access and Use**

#### 1. Access Control

ARAS regulates access to 3D printed replicas and 3D scanned files. Files that are available for public access are only for viewing and downloads are prevented. Access to downloadable files may be granted dependent on a case-by-case basis and may need to be approved by tribal partners through written consent. Dissemination of 3D files and/or prints to other institutions is prohibited unless agreed upon with ARAS at the time of the request.

#### 2. Research and Educational Use

Use of 3D reproduction for research, educational programs, exhibitions, and public outreach may need approval by tribal partners dependent on each case.

## **Evaluation and Review**

#### 1. Periodic Review

ARAS will regularly review this policy to ensure compliance with ethical standards, technological advancements, and changes in best practices.

#### 1. Stakeholder/Rightsholder Engagement

ARAS will solicit feedback from descendant communities and other stakeholders/rightsholders, and revise consultation and permission guidelines when necessary. ARAS will strive to anticipate future developments in technology that might impact how the scanned data could be used or shared and keep the community informed about these possibilities.

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## **Procedures**

## 1. Application

The application for 3D scanning and/or printing can be found at: <a href="https://archeology.uark.edu/forms-records/">https://archeology.uark.edu/forms-records/</a>. Once filled out you can email the application to the ARAS Registrar, Sarah Shepard <a href="mailto:shepards@uark.edu">shepards@uark.edu</a> and the ARAS Assistant Registrar, Madelyn Rose <a href="mailto:msrose@uark.edu">msrose@uark.edu</a>

## 2. Decisions and Approval

The ARAS Registrar's office will contact the rightsholders/shareholders first for consideration and confirmation and, pending approval from these groups, will move forward with the final approval process.

## 3. Questions and Concerns

Contact the ARAS Registrar's Office with any questions about the policy or application process.

Contact the Director of ARAS, Dr. Alex W. Barker, <u>barkeraw@uark.edu</u> with any other concerns.