Museums for America

Sample Application MA-251514-OMS-22
Project Category: Collections Stewardship and Access

University of Colorado (University of Colorado Museum of Natural History)

Amount awarded by IMLS:	$156,313
Amount of cost share:	$156,313

The University of Colorado Museum of Natural History will organize, inventory, catalog, and rehouse an archival collection created by Dr. Joe Ben Wheat, Curator of Anthropology and Curator Emeritus from 1952–1997. The archive includes historical, ethnographic, and archaeological site materials of particular interest to researchers of Southwest and Plains archaeology, the museum's curators, and Navajo weavers. The museum will hire an archivist and graduate assistants to facilitate project activities. The project team will digitize a portion of the archive based on priorities previously established by subject matter experts and reflecting data from past research requests. The museums will publish database records, digitized items, and finding aids and make them accessible through the museum's online database for researchers, Tribal nations, artists, and the public.

Attached are the following components excerpted from the original application.

- Narrative
- Schedule of Completion

When preparing an application for the next deadline, be sure to follow the instructions in the current Notice of Funding Opportunity for the grant program and project category to which you are applying.

Joe Ben Wheat Archives: History and Anthropology, Preservation and Access

PROJECT JUSTIFICATION

The University of Colorado Museum of Natural History (CUMNH or Museum) Anthropology Section respectfully requests funding to complete an 18-month project to organize, inventory, catalog, and rehouse an archival collection created by Dr. Joe Ben Wheat (JBW), Curator of Anthropology and Curator Emeritus from 1952–1997. Additionally, a selection of the collection will be digitized and published online. This project will address IMLS Goal 3: Collections Stewardship and Access, as well as Objectives 3.1, 3.2, and 3.3 through the activities listed above and described in further detail below.

The anthropology section stewards 1.5 million archaeological and ethnographic objects and over 603 linear feet of archives. These collections are visited by researchers an average of 98 days per year. Due to the duration of Dr. Wheat's tenure as curator, around 70% of the Museum's anthropological materials result from his extensive archaeological and ethnographic work. The proposed project activities support both the institutional strategic plan goals of digitization and the anthropology section's strategic goal of gaining intellectual control over the archival collections. This archive includes historical, ethnographic, and archaeological site materials and was prioritized for processing based on several factors including demand, preservation condition, and relevance to the object ("artifact") collections.

As a result of this project, an online finding aid and database will make these significant "hidden" collections accessible for our target groups - researchers of Southwest and Plains archaeology, CUMNH curators, and Navajo weavers. With the breadth of this collection, it was essential to consult with our target groups to ascertain which sections of the archive will be the focus of this project. Curators provided on-site input, data on previous research requests was screened for subject matter interests, and we put a call out to Navajo weavers through an art gallery to gage interest (see Letters of Support). While no reliable estimated counts can be ascertained due to the breadth of potential interested parties, the beneficiaries of this project include researchers in the disciplines of archaeology, anthropology, history, and art; the Tribes from which these collections originated; and the general public. Data derived from the archives are expected to inform research, the production of outreach materials, and future exhibit content, including both physical and digital formats.

Access to this archive is essential to providing contextual data for the Museum's corresponding collections. While the collections themselves are impressive, there is potential for much deeper research value with the accompanying field and research notes found in this archive. Preserving these archives is of critical importance in that they are integral to the Museum's collections; one is needed to understand and provide context for the other. Preservation projects are also a source of education in best practices for our affiliated museum and field studies graduate program. As such, the collections serve as examples by which future museum professionals learn object research, collections preservation techniques, and Tribal consultations.

Furthermore, the Museum acknowledges that the JBW archives contain information relating to knowledge and items belonging to at least 49 identified living Indigenous nations and their ancestors (see Supporting Document 1). While the inclusion of anthropological collections in a museum of natural history remains a legacy of colonialism, we strive to incorporate the perspectives and wishes of these communities into decisions concerning the handling, care, and accessibility of the collections. However, a full understanding of the provenance and history of the materials we house, as would be supplemented by data within the JBW archives, is necessary to faithfully pursue this approach to museology.

<u>Archive Collection Overview</u>

The Joe Ben Wheat papers consist of 47 linear-feet of correspondence, field notes, reports, manuscripts, slides, and photographs. During his time at CUMNH, Dr. Wheat's most significant accomplishments included leading excavations at

the largest known Mesa Verde Culture site--Yellow Jacket (also known as the Joe Ben Wheat Complex); directing excavations at the famous and data-rich Paleoindian Olsen-Chubbuck Bison Kill Site; and becoming the preeminent expert in Navajo textiles, developing a collection of nearly 1,000 weavings. The Wheat papers also include correspondence with premier archaeologists of the time including Emil Haury, Frank H. H. Roberts, Jr., J. O. Brew, James C. Gifford, E. B. Renaud, Watson Smith, and Raymond Thompson.

Due to changing professional practices, including greater consideration of the views of descendant communities and distancing factors due to COVID-19, researchers are increasingly turning their attention to museum collections, rather than exclusively focusing on new excavations in the field. This results in a larger demand for processed collections and accessible field notes and archives. Additionally, these archives are also essential to the Museum and federal agencies' compliance with the Native American Graves Protection and Repatriation Act (NAGPRA). Consultations with Tribes are ongoing, and information found in these archives is critical for identifying which objects fall under the requirement for repatriation, as well as giving context for cultural affiliation determinations. These archives are also of key significance for research by CUMNH personnel. The Museum has hired two new curators of archaeology, one focusing on Southwest archaeology including Yellow Jacket and the other focusing on zooarchaeology including the Olsen-Chubbuck material. The Museum also employs a curator of cultural anthropology whose area of responsibility includes the textile collection. For the curators to fully understand the collections for which they are responsible, access to the records, analyses, and impressions of Dr. Wheat during his 45 years as curator or curator emeritus is essential. The below includes a brief look at specific subjects available in this archive.

Highlights from the Joe Ben Wheat Archive

Yellow Jacket - The Yellow Jacket site, located in southwestern Colorado, is listed on the National Register of Historic Places due to its significance for understanding the culture of the Ancestral Puebloan peoples. The work at this site spanned 21 field seasons between 1954 and 1991 and yielded over 300,000 objects and samples, which are curated by the Museum. The methodology employed provided a unique view of life from the 7th through 13th centuries and resulted in the identification and documentation of several unusual architectural features, such as carved floors and tunnels. A full report of the research was, unfortunately, never completed, which has limited the subsequent studies of these important sites.

Together, the JBW papers and a separate but related Yellow Jacket collection document the largest excavation in the history of CUMNH through more than 35 linear feet of field notes, photographs, journals, sketches, and maps. Processing and partial digitization of the Yellow Jacket archive began in Fall 2020 with grants from the National Endowment for the Humanities and the Colorado State Historical Fund. While work has begun on the Yellow Jacket-specific archive, it is currently unknown how much additional information about the site may be included in the rest of the JBW papers. A project of this excavation's scale and scope inevitably bleeds into the personal correspondence and notes of its lead archaeologist. The processing and rehousing of the JBW archive is a necessary step to gain full intellectual control over the excavation and position the collections to be incorporated into current and future research into the history of the Southwest U.S (see Cater letter of support - Document 11).

Olsen-Chubbuck Bison Kill Site - The site of Olsen-Chubbuck, located in eastern Colorado, is well-known within archaeological communities as one of the key sites to understanding the early populations of North America (see Byerly letter of support - Document 11). First discovered in the late 1950s, excavations were led by Dr. Wheat. The well-preserved assemblage, which dates to the 9th millennium BCE, consists of the skeletal remains of more than 200 bison and the stone projectiles and tools used to butcher them. The material, recovered from a small arroyo apparently used to trap and slaughter the bison, has provided some of the clearest insights into the subsistence techniques and social organization of Paleoindian people.

While Wheat's analysis of the assemblage during the 1960s and 1970s was both systematic and innovative, the collection has only been dated once, using outdated radiocarbon techniques, and has been rarely utilized since that time. The presence of intact or nearly intact carcasses, associated stone artifacts, and excellent faunal preservation creates an unparalleled resource for investigation of early human-animal interactions using emerging technologies, such as biomolecular techniques and 3D digitization. However, the field notes, correspondence, and research files which document the site are contained in fragile notebooks and are scattered throughout the JBW archives. Processing and digitization of these materials will make it possible for researchers and graduate students to revisit this enormous dataset with modern research methods, and shed new light on the lifeways, ecology, and culture of the Great Plains in the deep past.

Navajo Textiles - The textile collection consists of Navajo, Pueblo, and Spanish Colonial textiles including blankets, rugs, mantas, and dresses, which were primarily produced in the 19th and early 20th centuries. A well-known Southwest archaeologist at the time, Wheat brought his systematic archaeological mind to the acquisition and research of these textiles. Today it is considered one of the top ten public collections of Navajo textiles in the world (see Hedlund letter of support - Document 11).

While the textile collection can stand alone as a significant museum resource, it is the accompanying archives that make this a complete scholarly work. Wheat spent a sabbatical year traveling the country and researching over 3500 textiles from 50 institutions and private collections. These documents consolidate information about the history of the particular piece - dyes, yarns, and provenience. He also researched archives and historical documents and compared them with what he was seeing in museum collections. This work led him to identify the three major cultural traditions in Southwestern Textiles – Pueblo, Navajo, and Spanish American (or Spanish Colonial) – and also allowed him to come up with a system by which textiles can be given relative dates. Additionally, he and his students researched details such as yarn spin and performed dye analysis for every textile in the collection at the time. Each textile is accompanied by its own textile analysis sheet (See Supporting Document 3). Wheat's notes, transcriptions, resources, and analysis of hundreds of textiles can be found in his archives and can provide the keys that turn an already extraordinary group of objects into one of the finest research type collections of textiles in the world.

Preservation Status and Needs

At this time this critical archive is largely inaccessible. There is no true finding aid and inventories are vague and generalized (Supporting Document 4). The materials are in poor condition and are currently housed in myriad ways, from file cabinets to boxes to wooden drawers. Many documents in the archive show signs of damage that will worsen if they are not rehoused, including pages slumping and tearing. Photos and slides are not housed in archival materials, leading to potential acid transfer and deterioration (see Supporting Document 5). Compounding preservation concerns, there is often no way to understand the full contents or context of each folder or item in the archive without physically opening and handling them. Folders are labeled inconsistently and often have titles that either inaccurately or incompletely describe the contents inside. This results in a lack of intellectual control that limits the ability of researchers to locate pertinent information. A new intellectual arrangement and rehousing will highlight the aspects of the archive most important to researchers, including contextual details and prior analyses of the associated artifacts.

The archive is rarely requested due to the lack of published information and a clear inventory. During this project, the JBW papers and photographs will be rehoused using archival-grade supplies; we will complete cataloging in our Re:discovery archives database, and a finding aid meeting professional standards will be generated from the database records. We also plan to digitize approximately 13% of this archive, a selection which will reflect top priorities for preservation and access based on a survey of research requests as well as physical condition.

This project is part of a multi-stage funding effort (see Supporting Document 2 for an illustration of grant contributions) to fully process these archives, digitize priority items, and connect this valuable information with the physical collections

to allow for safe and accessible research. CUMNH staff recently completed a similar project to process, rehouse, and digitize the archives of archaeologist Earl Morris, funded by the National Historical Publications and Records Commission (NHPRC). Throughout this previous project, staff tested the methodologies and technical specifications detailed below. Each is now standardized and optimized for efficiency. Results of the project include publication of the archives in our online database, publication of the finding aid on the University's ArchivesSpace, and harvesting of this data by ArchiveGrid. This pilot project informs budget, time, and materials estimates and ensures our capacity and readiness for the JBW project. The NEH and CO SHF grants mentioned above will continue this work for the Yellow Jacket portion of the archive.

PROJECT WORK PLAN

The project plan will take 18 months to complete. Highly skilled staff will lead the project and will provide training for students and volunteers (see Resumes for credentials and job descriptions). The archivist will write and implement a processing plan for the collection. Once processed and rehoused, prioritized selections from the archive will be digitized. Finally, digital products and database records will be published online for broad public access. The stages of this work are as follows.

Month 1: Create an inventory of current folder titles; perform background research
Month 1-3: Develop formal processing plan; meet with curators and staff to gather input
Month 4-6: Rehouse the collection according to the processing plan
Month 4-9: Enter metadata for collection, series, file, and, when necessary, item levels into database
Month 10-12: Process existing images of textile analysis sheets; cross-reference with textile collections
Month 13: Publish finding aid
Month 12-17: Digitize selected archival documents (Supporting Document 6)
Month 18: Publish metadata and digital images online; disseminate textile information to weavers

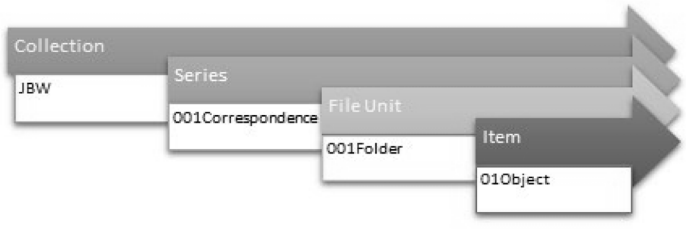
Phase I - Processing and Rehousing - During the processing stage (months 1-3), the archivist (Will Gregg) and graduate assistant (TBD) will improve upon and add to existing inventories of the collection. The refined inventory will encompass an estimated 47 linear feet of material and will include the titles of boxes and folders, coded subject areas, and photographs of the collection. The archivist will also perform background research into the collection to gain insights about how the materials were created, by whom, and over what dates. This information will be recorded in a narrative format and will inform processing decisions.

Drawing from insights gained in surveying, the archivist will identify the most logical intellectual arrangement, dividing the collection into hierarchical series and files. The archivist will then present this arrangement to the curators (Sam Fladd, Will Taylor, and Jen Shannon) and collections manager (Christina Cain) who will help ensure anthropological research needs are addressed. Once finalized, the archivist will record the intellectual arrangement in a formal processing plan. The archivist will then create titles for the units of the new arrangement according to guidelines in Describing Archives: A Content Standard (DACS). These new titles will be shown side-by-side with old folder and binder titles in a spreadsheet and will serve as a record of processing decisions. The graduate student will enhance the spreadsheet by adding date information and the archivist will assign unique identifiers to each archival unit. The archivist and graduate student will later use the spreadsheet to edit physical folder labels in the rehousing stage and for data import in the cataloging phase.

In the rehousing stage, the archivist will follow the instructions of the processing plan to rehouse the materials in the appropriate order with the assistance of the graduate student. Documents are currently stored in acidic, non-archival folders, as well as in file cabinet drawers that are not the appropriate size for maps, larger journals, and other items. Upgrading to archival boxes of appropriate size will ease access and result in better preservation. Standard-size documents (8.5 x 11 inches) will be rehoused into acid-free folders and placed sequentially in archival document boxes.

Maps and plans, the only oversized items in the collection, will be flattened, encapsulated in Mylar if torn or friable, and stored in a newly purchased flat file cabinet. Both the collections manager and archivist will participate in the encapsulation process. The 6,000 transparent slides in the collection will be moved to acid-free enclosures and stored in appropriately sized boxes. Lastly, the graduate assistant will label enclosures with title, date, and unique identifier information using the spreadsheet created in the processing phase. Shelving in our archives storage is available for receiving the newly boxed collections.

Phase II - Cataloging and Digitization - Researchers interested in paper documents generally request items at the file-unit level and by subject, requiring resources that describe the collection in detail meeting DACS standards for multilevel description. Accordingly, the archivist and graduate assistant will enter information for series and file units into the database (screenshots available in Supporting Document 7) and, in Phase III, an online finding aid. The number of series and file records will total approximately 500. At the series level, metadata for each database record will include title, extent, inclusive dates, shelf location, creator, biographical/historical note, and scope and contents. At the file level, metadata fields will include title, extent, inclusive dates, shelf location, creator, and a brief summary. The archivist and graduate student will use the Museum's existing protocol for archival data entry to ensure consistency and quality (see Supporting Document 9 for excerpt). This metadata and database access will facilitate use of the collection by staff and curators, as well as public searching once digital content is published online. The figure to the left models the hierarchical arrangement of records in our database.



When cataloging nears completion, the archivist, curators, and collections manager will assess the now-processed collection to determine final priorities for digitization, to take place in months 10-17 (preliminary areas selected for digitization appear in Supporting Document 6). Once a final selection has been made, the archivist will enter descriptive catalog information into the database at the item-level when necessary. In previous projects this was done for still image materials, selected field notes, and items of correspondence where efficient use requires a greater degree of intellectual control.

Once the metadata for documents and images is prepared, the archivist, graduate student, volunteer (TBD) and summer hourly (TBD) will begin digitization by processing pre-existing digital images of the textile analysis sheets. Images of these documents will be checked for quality and uploaded to the database at the item level (month 10-11). These sheets contain data about textiles in the Museum's collection. The archivist and graduate student will perform research to match the sheets with the textiles and cross-reference the corresponding records in the database (month 11-12). Digitization will then continue with materials that have not previously been scanned (months 12-17) following the process outlined in Supporting Document 8. It will require 980 hours to complete digitization for approximately 7,216 pages (see Supporting Document 6) including time for training, supervision, and quality control. The archivist and graduate assistant will use the Museum's existing digitization protocol (Supporting Document 10) to guide their work in this process.

The archivist will supervise the graduate student, hourly position, and volunteer in digitizing materials according to the Federal Agencies Digital Guidelines Initiative (FADGI) 4-star guidelines for unbound documents and photographs. These guidelines can be found on pages 22 and 33 of the *Technical Guidelines for Digitizing Cultural Heritage Materials*. We have provided a more detailed explanation of digitization methods and technical specifications in our Digital Products Plan. Adherence to FADGI guidelines will ensure the consistency, quality, and long-term usefulness of the images created during digitization.

As part of the digitization process, the archivist will screen documents and photographs for content that requires restriction in compliance with the Archaeological Resources Protection Act (ARPA) or because of cultural sensitivity, per the Society of American Archivists' Protocols for Native American Archival Materials. ARPA states that the location of archaeological resources on public or tribal lands must remain confidential if its release may harm the resources. It is also museum practice to demonstrate cultural sensitivity toward descendent communities by restricting images of human remains and associated funerary objects. If any such content is digitized, the image will remain available for internal use or bonafide researchers only.

Our policy on restrictions and contact information for inquiries will be clearly posted on the Museum's online database. In addition, the online database will provide further guidance on access and use in the form of copyright information and Traditional Knowledge (TK) labels. The archivist will research copyright status and select standardized statements with corresponding URIs from www.rightsstatments.org. When published online, these URIs will enable the copyright statements to appear as clickable logos which redirect the user to further information housed at rightsstatements.org. In the same manner, the Museum will pilot the use of Traditional Knowledge (TK) labels. TK labels are "a tool for Indigenous communities to add existing local protocols for access and use to recorded cultural heritage that is digitally circulating outside community contexts". These labels will provide users with information about the significance of digital objects within the indigenous communities where they originated. The archivist will apply labels based on prior consultations between the Museum and tribes regarding culturally sensitive images and information (e.g., images of human remains and/or funerary objects). Future funding (2021 Wenner Gren grant) is being sought for more in-depth consultations related to this topic. Labels may include (but are not limited to) the following.

- TK Notice - a collection-level label that indicates the ongoing development of more specific labels
- TK Attribution - a notice of the importance of recognizing the correct sources and custodians of the object
- TK Culturally Sensitive - a notice of derogatory language, known or possible errors in description, or particular cultural importance
- TK Sacred - a notice of secret/sacred information which, in the case of this collection, is not publicly available. This label complements access restrictions placed on material in accordance with ARPA or for reasons of cultural sensitivity outlined above.

When ready for long-term storage, the archivist will create checksum manifests for the master images using Bagger, an open-source program developed by the Library of Congress. The archivist will upload the images along with their manifests to the University of Colorado's PetaLibrary Research Computing server. The PetaLibrary service enables the deposit and discovery of digital surrogates of archives and special collections materials. PetaLibrary stores checksummed images on a cost- and energy-efficient hierarchical storage management system consisting of both disk and LTO-6 tape. All storage hardware is housed in environmentally controlled data centers with uninterruptible power. The biggest risk to Phases I and II is another shut down due to COVID-19 (see COVID interruption plan - Supporting Document 12).

Phase III - Publishing - Once metadata creation and imaging is complete, the archivist will export information in the database records to create an EAD-compliant (Encoded Archival Description) finding aid which will then be uploaded to the university library's ArchivesSpace catalog. Records from ArchivesSpace are regularly ingested into ArchiveGrid, a national database of finding aids. All catalog records and non-restricted digital images will be published on our online database. Additionally, the project director will share the digitized documents related to textiles and associated images of the physical textiles to contemporary Native weavers. Preliminarily, staff have been in touch with one Navajo weaver with an interest in the historical analysis of the collections. The project director will network through this weaver and the Toh-Atin Gallery in Durango, CO to try to maximize information sharing. The owners of this gallery work very closely with contemporary weavers and have agreed to help share the archives and collections information with their clients (See Clark, Jr. letter of support - Document 11). Clark will track names of weavers with whom the information is shared and will report those to the Museum.

PROJECT RESULTS

This project will holistically process the JBW archive, thereby producing enhanced intellectual control of this incredible resource. The processing and rehousing activities provide a platform by which members of the target group can develop future projects, including research projects currently in development by the curators, as well as enhances the ability of the Museum to fully and faithfully implement NAGPRA. The archive will be searchable and accessible in a safe manner, in line with best practices in preservation. Whereas research questions currently take hours of searching and handling by staff, online databases and finding aids will expedite this work and will result in far less handling of the documents. The digitization of portions of the archive will also allow the easy dissemination of archival materials to researchers, students, descendent communities, and other interested beneficiaries. Additionally, the materials will inform the Museum moving forward. Aspects of the processed archival collection are likely to appear in outreach materials, public programming, and exhibits. Together, these outcomes ensure federal investment will benefit society more broadly, including artists, such as Navajo weavers.

The project director and manager will announce completion of this project and products through social media, tracking interactions. Additionally, a unique Facebook and Instagram page will be created to follow digitization progress (see current pages for the Museum Archives on Facebook and Instagram). Advertising will also be done through the Colorado Council of Professional Archaeologists, the Historic Preservation offices of the Four Corner states, and the Society for American Archaeology. Lastly, we will direct publicity to known constituents in the form of emails and flyers sent to CU Anthropology department students and professors.

Data will be collected in the form of statistics tracking research requests, as well as Google analytics to measure the number of database website hits. Social media will be monitored for the number of followers, likes, and resulting queries.

The following tangible products will be produced:

- 47 Linear feet of records processed (before and after images to be provided)
- 47 Linear feet of records rehoused (before and after images to be provided)
- An estimated 2,500 new database records (screenshots to be provided)
- Published finding aid (links to be provided)
- Approximately 7,216 pages digitized (statistics will be kept and reported)
- All unrestricted records and digitized images published at the following locations (links to be provided)
    - CUMNH Anthropology Collection online database
    - CUMNH ArchivesSpace repository
    - ArchiveGrid

All technologies, server storage, databases, etc. mentioned in this proposal are funded by continuing budget through the Museum and University. Archival supplies can be upgraded as needed through a collections care endowment held by the anthropology section. Access and preservation care is managed long-term by the collections manager, a permanent position in the Museum.

By creating complete, web-accessible object records, the knowledge of these collections will improve, and their physical care can be enhanced. This work will increase the research value of these collections, return intellectual property to Native weavers, and will provide an example of best practices for our students, which will prepare them for working in museum careers after they graduate. Gaining greater intellectual control of this archive will also allow our students, researchers, related Indigenous communities, artists, and the general public the opportunity to learn about these collections and utilize them in future education and study.

Joe Ben Wheat Archives: History and Anthropology, Preservation and Access

SCHEDULE OF COMPLETION

	Months 1-3	Months 4-6	Months 7-9	Months 10-12	Months 13-15	Months 16-18
Collection inventory						
Develop processing plan						
Rehouse the collection						
Metadata collection and cataloging						
Process and upload pre-existing images of textile analysis sheets						
Cross-reference textile analysis sheets to museum collections						
Digitize selected documents						
Publish finding aid						
Publish metadata and digital images online						
Info sharing with Native weavers						